Thanet Parkway Station

Business Case

On behalf of **Kent County Council**

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Introduction

This report sets out the business case for a proposed new Thanet Parkway passenger railway station at Manston. The station would be located on the Ashford International to Ramsgate line, south of Manston Airport site and just to the west of the village of Cliffsend. It would be located between the existing Ramsgate and Minster stations.

The purpose of the station would be to support potential new development at the Enterprise Zone Discovery Park, Manston Park and EuroKent Business Park, which are all within 3 miles of the proposed station location and Westwood Cross Retail and Shopping Centre, to provide significantly improved access to Manston Airport site; and to provide additional car park capacity for park & ride to supplement existing provision at Ramsgate station.

The business case has been produced in line with the relevant guidance and reference documents including the Department for Transport (DfT) Transport Appraisal Guidance (TAG) Unit A5.3 and the Association of Train Operators Council (ATOC) Passenger Demand Forecasting Handbook (PDFH).

Current Situation

Rail services in East Kent consist of High Speed and 'Main Line' conventional operations, all operated by Southeastern Railway. Domestic services on the High Speed 1 (HS1) line to London St Pancras commenced in December 2009 and have had a marked effect on journey times between East Kent and London, with a journey time of 75 minutes as opposed to 120 minutes by classic rail services.

Planned improvements affect service patterns and journey times: in December 2014 Southeastern intend to introduce a new "circular" pattern of High Speed services around East Kent which will increase the frequency of High Speed services to Ramsgate and create new direct links between North and East Kent. In addition, Network Rail is expecting to improve the line speeds on the Kent Main Line in two phases, the second of which should be completed by 2018/19. These will reduce the journey time by 6 minutes.

The total capital cost of the station is estimated to be £11.2m at current prices with the annual operating cost at circa £0.15m. This is on the basis that the station is unstaffed and that CCTV and Help Point monitoring is conducted remotely by existing resources.

Demand Modelling

The demand forecasting approach that has been used is relevant to the stage of the scheme development (GRIP stage 3) and complies with the following guidelines: Transport Analysis Guidance (WebTAG), Passenger Demand Forecasting Handbook (PDFH), Network Rail, Association of Train Operating Companies (ATOC) and Office of Rail Regulator (ORR) and best industry standards.

The base model was built using the following data sources: passenger interviews and counts conducted at Ramsgate and Canterbury stations in November 2013, ITN and TrafficMaster traffic data, NRTS rail passenger data, the 2011 Census and the National Rail website.

Key destinations and access modes were assessed for passengers boarding at Ramsgate from MOIRA data supplied by Southeastern and checked against the passenger interview surveys.

Generalised journey times were derived for each station in the study area, from the mean service interval and transit time, rail fare and parking charge.

An OmniTrans model was constructed for the purpose of assessing drive times (peak period) and distances (for walk access) from across the study area to each of the rail stations in the study area. A zoning system based on Census geography was used and matrices of times and distances were copied from OmniTrans into the spreadsheet model.

Expansion factors for identifying weekend passenger numbers were calculated using the relative proportion of weekday-to-weekend rail trips made, drawn from the National Travel Survey.

The results were applied to the future-year population data (projected using ONS projections by local authority), with and without Thanet Parkway in operation, including the modelled passenger numbers for the proposed Thanet Parkway station itself.

The estimated demand for parking at Thanet Parkway station car park was calculated using the modelled passenger numbers by car/other in conjunction with the proportion derived from drive-plus-lift from the Ramsgate interview data.

Economic Appraisal

The economic analysis has been undertaken using a spreadsheet based model that covers a 60 year appraisal period and considers the following:

- Rail fares income – from three sources: users new to the rail network, users who have switched from a nearby station, and users who no longer travel. The net generated revenue, i.e. new users' income less lost users' income is used for the appraisal.

- Capital, operating and maintenance costs – of both station and car park.

- User benefits – those who use the new station do so in response to a generalised cost advantage which counts as a user benefit; this is partially offset by those who continue to travel through/from Ramsgate who suffer a disbenefit as a result of the additional station stop.

- Non user benefits – savings in the costs of congestion, infrastructure, accidents, local air quality, noise and greenhouse gases due to fewer trips being made by car. The analysis also includes the loss of indirect taxation through reduced fuel use.

The results of the economic appraisal are that the station with parking charged at £3.50 per day has a benefit cost ratio of 2.93 and if parking is free of charge, the benefit cost ratio is 2.97. Both of these results represent high value for money.

Commercial Viability

The commercial viability is calculated over a 30-year period. The viability of the proposal needs to be demonstrated to the train operating company, the operator of the station, the car park operator, Network Rail and the Department for Transport. Each of these parties needs to be satisfied that the ongoing income streams from generated fares income and parking charges exceed the costs of operation and maintenance of the facilities.

The appraisal shows net generated fares income to be £638k per year if parking is charged for and £509k per year if parking is free. Annual operating costs are forecast to be £146k per year which means that the station would cover its costs and be commercially viable in either scenario.

If parking is charged at £3.50 per day, the car park is commercially viable with income exceeding costs and delivering a profit of £78k per year. If parking is free, there is no income stream and consequently a loss of £13k per year. This is a relatively modest figure which could be covered by increased rail fares income if the car park is managed by the TOC.

Conclusions

The station has a benefit cost ratio of 2.93 with charged parking and 2.97 with free parking, both of which represent high value for money. The station is commercially viable with net generated fares income well in excess of operating costs and the car park is also commercially viable if parking is charged.

1   Introduction

1.1   Background

1.1.1   This report builds on previous feasibility design and outline business case work for a proposed new Thanet Parkway passenger railway station at Manston. The station would be located on the Ashford International to Ramsgate line, south of Manston Airport site and just to the west of the village of Cliffsend.

1.1.2   The purpose of the station would be to provide significantly improved access to Manston Airport site; to support potential new development at the Enterprise Zone Discovery Park, Manston Park and EuroKent Business Park, which are all within 3 miles of the proposed station location; and to provide additional car park capacity for park & ride to supplement existing provision at Ramsgate station.

1.1.3   This report sets out the business case for a proposed new Thanet Parkway passenger rail station. It tests the extent to which the proposal is economically feasible and financially viable in accordance with the Network Rail's Governance for Railway Investment Projects (GRIP) stage 3 protocols.

1.2   Objectives

1.2.1   The objectives of this project are to:

- Develop fit-for-purpose base year and future year demand models for a new parkway station

- Quantify and appraise the traditional economic benefits of a new station in line with the available guidance and best industry standards

- Perform sensitivity tests to indicate the impact of key risks to the forecasts

- Develop a robust business case setting out the extent to which the proposal is economically feasible and commercially and can therefore justify the proposed new rail station.

1.2.2   The business case follows the 'five cases' model set out in HM Treasury's Green Book and adopted by the Department for Transport to show whether schemes:

- are supported by a robust case for change that fits with wider public policy objectives – the 'strategic case';

- demonstrate value for money – the 'economic case';

- are affordable – the 'commercial case';

- are viable – the 'financial case'; and

- are achievable – the 'management case'.

1.3   Report Structure

1.3.1   The report is structured to summarise the current situation relating to rail services in the area in chapter 2 and to set out the rationale for the new station with a description of the proposed scheme and the issues it is intended to address in chapter 3.

1.3.2   The process of model development is described in chapter 4 and the resulting forecasts are set out in chapter 5. An alternative option of enhancing facilities at Ramsgate station is discussed in chapter 6.

1.3.3   The economic analysis is presented in chapter 7, containing the economic appraisal and identification of the benefit cost ratio. Testing of financial viability is contained in chapter 8 where operating costs and income streams are compared.

1.3.4   Finally recommendations for the way forward are provided in chapter 9.

2   Current Situation

2.1   Rail Services and Stations

Rail services in East Kent consist of High Speed and 'Main Line' conventional operations, all operated by Southeastern Railway. The network is shown in Figure 2.1 below.
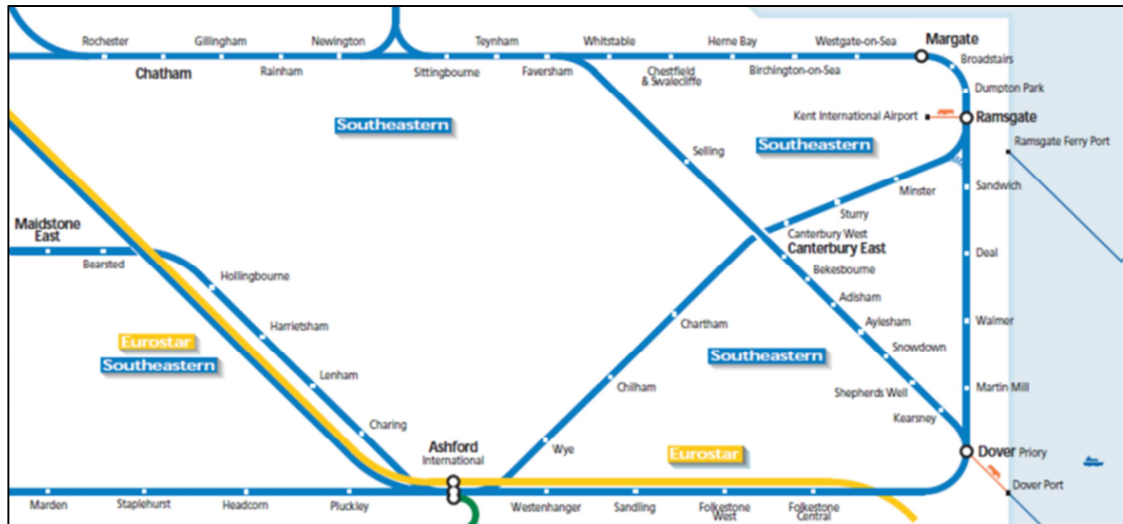
Figure 2.1: Rail Network in East Kent

High Speed

2.1.1   Domestic services on the High Speed 1 (HS1) line between Ashford International, Stratford International and London St Pancras commenced in December 2009. Services use Class 395 "Javelin" electric multiple units with a top speed of 140mph, and are operated by Southeastern as part of the Integrated Kent Franchise which expires in June 2018.

2.1.2   Introduction of these services has had a marked effect on journey times between East Kent and London, with travel on the "Javelin" services between Ramsgate and London offering a journey time of 75 minutes as opposed to 120 minutes by classic rail services. In the annual survey of rail station patronage, the Office of Rail Regulation has noted significant increases at a number of stations in East Kent, including Sandwich, Canterbury West and Folkestone West (all of which are in excess of 20% above the mean increase); these have been attributed to the introduction of domestic services on HS1.

2.1.3   As a result of these significant journey time savings, opportunities for commuting and leisure travel between East Kent and London are considerably enhanced. A return journey between Ramsgate and London is a much more attractive proposition now that journey times of 1¼ hours in each direction can be achieved. At the same time as the introduction of HS1 services has improved links to London, the release of capacity on the classic rail network has allowed for improved services to other stations and for additional cross-county links to be created.

2.1.4   Southeastern intend to build on these enhancements in December 2014 by introducing a new "circular" pattern of High Speed services around East Kent which will increase the frequency of High Speed services to Ramsgate and create new direct links between North and East Kent. This new service would significantly increase the scope for direct High Speed travel to Thanet Parkway, including a new hourly service to/from the Medway Towns and Whitstable.

2.1.5   Against a background of continued growth in passenger numbers on HS1 domestic services, demand for classic rail has also increased over the past five years – despite a fall in overall passenger numbers and km during the recession. Patronage at Ramsgate station increased by 18% between 2006/07 and 2011/12, with an increase of 5.3% in the year High Speed

services commenced. (Source: Office of Rail Regulator (ORR) Data : Estimates of Station Usage (Annual entries and exits for each station, year by year from 2001/02)

2.1.6   The current service pattern is approximately half-hourly in the Monday to Friday peak periods and hourly at other times including Saturdays and Sundays.

2.1.7   The journey time from Ramsgate to Canterbury West is 20 minutes, to Ashford is 36 minutes, to Stratford is 1 hour 09 minutes and to St Pancras is 1 hour 16 minutes.

Main Line

2.1.8   On the non-high speed network there are two trains an hour from Ramsgate which join at Ashford International to form a single service into London Charing Cross. One service calls at most stations from Ramsgate to Ashford via Canterbury West on the Kent Main Line. The other service calls at all stations from Ramsgate to Ashford via Sandwich, Dover and Folkestone on the Kent Coast Line

2.1.9   The journey time on the Kent Main Line from Ramsgate to Canterbury West is 28 minutes, to Ashford is 45 minutes, and to Charing Cross is 2 hours 12 minutes.

2.1.10   The journey time on the Kent Coast Line from Ramsgate to Dover is 34 minutes, to Ashford is 1 hour 05 minutes, and to Charing Cross is 2 hours 29 minutes. The service is not a practical route to London as it is always quicker to use the Kent Main Line.

2.1.11   There are also two trains per hour from Ramsgate to London Victoria which call at most stations via Margate, Chatham and Bromley South. Journey time to Chatham is 1 hour 14 minutes and to London Victoria is around 2 hours.

Rail Stations

2.1.12   The nearest rail stations to the proposed Thanet Parkway site are at Minster and Ramsgate on the Kent Main Line, shown in Figure 3.1. Sandwich station, while only five miles from the proposed site, is on the Kent Coast Line and therefore not a realistic alternative for London.

2.2   Patronage

Figure 2.2 below shows the level of use of Ramsgate station in recent years.
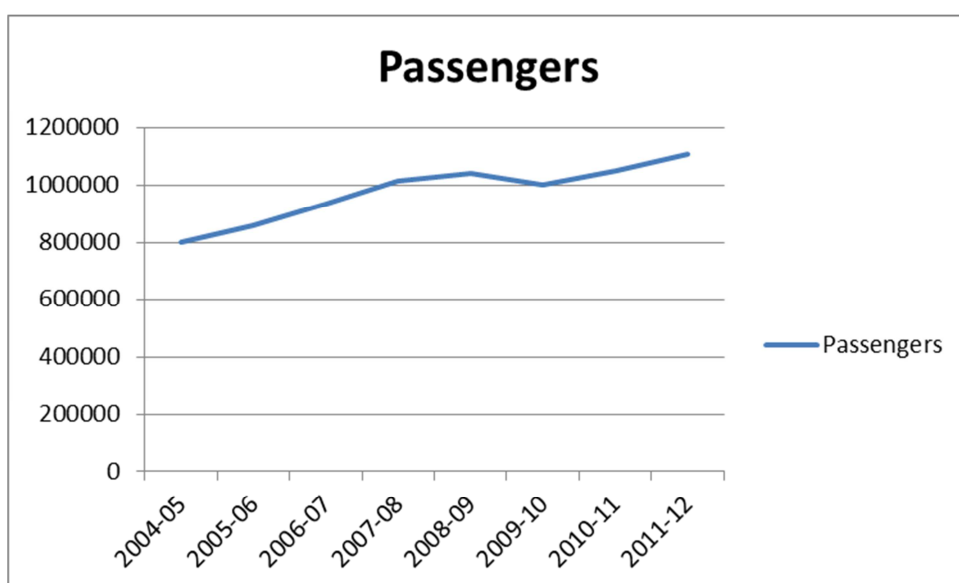
Figure 2.2: Annual Passengers Using Ramsgate Station (Source: Office of Rail Regulator (ORR) Data: Estimates of Station Usage)

2.2.1 Total passenger use has increased by 38% over the eight year period from 2004-05 to 2011-12. Although there was a slight fall in 2009-10 growth generally has been consistently around 5 to 8 percent per year.

2.3 Planned Improvements

2.3.1 Kent County Council and Network Rail are expecting to improve the line speeds on the Kent Main Line in two phases, the second of which should be completed by 2018/19. These will reduce the journey time by 6 minutes to 30 minutes, as shown in Figure 2.3 below.
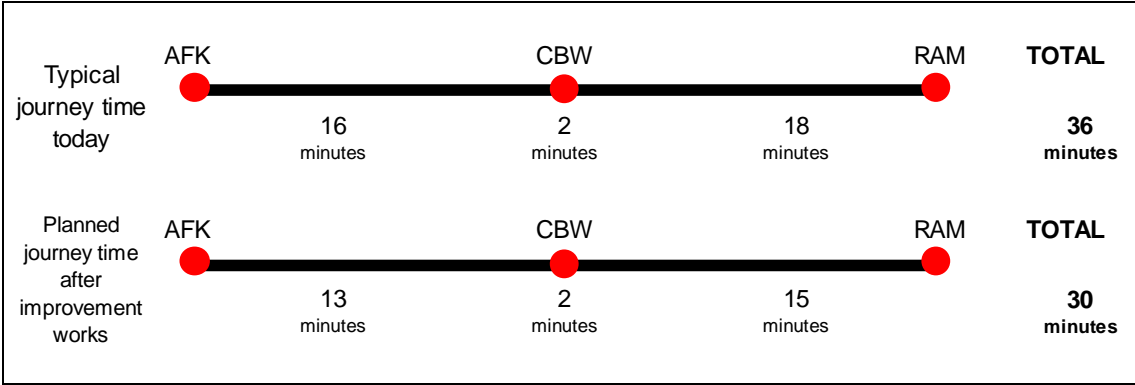
Figure 2.3: Planned journey time improvements between Ramsgate and Ashford (Source: Network Rail)

2.3.2 The combined impact of these journey time savings would be to reduce the Stratford International to Thanet rail journey time to less than one hour.

2.3.3 As these journey time improvements are already planned, they do not form part of the Thanet Parkway scheme and so do not enter the economic case and was not taken into account in the modelling. Our modelling base was calibrated to survey counts – hence the current timetable. The 'with Thanet Parkway' modelling required adjustments to the current timetable; this impact on Ramsgate patronage was modelled using an elasticity on the additional journey time (compared to 'No Thanet Parkway' case).

2.3.4 However, they do provide the opportunity to introduce the station and keep the same pattern of trains and timings in east Thanet.

3 Scheme Description

3.1 Rationale

3.1.1 The rationale for Thanet Parkway station is that, in conjunction with the journey time improvements described in section 2.4, it would significantly improve rail access to Manston Airport site and local business parks; increase job opportunities by widening the employment catchment for East Kent residents; and provide additional park & ride opportunities for local residents. These benefits are considered further below.

Access to Employment

3.1.2 There are a number of development proposals and opportunities within three miles of the proposed station. Significantly improved rail access would increase the attractiveness of East Kent for inward investment and extending the labour catchment as far as London. Specific sites are:

- Manston Park – about 172 acres of serviced land for commercial development. Manston Park and EuroKent Business Park are a joint initiative between Kent County Council and Thanet District Council that has the potential to deliver 550 homes and 4,000 jobs.

- EuroKent Business Park – about 100 acres of mixed use business and commercial development on a fully serviced site.

- Discovery Park Enterprise Zone which covers 99.4 hectares on the Pfizer site at Sandwich. The Discovery Park has a potential for 3,000 new jobs by 2017. Around 800 jobs have been retained or created with Pfizer retaining a core pharmaceutical presence.

Access to Manston Airport Site

3.1.3 Manston Airport closed in late 2014 and there is now uncertainty around what will happen with the site. One possibility is that the site will be developed or partially developed for mixed use and the station would offer improved access to what could be an important site in the future. Given the above and the uncertainty with understanding future growth and direction of the airport site, it is very difficult to predict the role the site may have on the future use of a rail station at Thanet Parkway.

Park and Ride

3.1.4 Ramsgate station currently has 44 parking spaces[1] which would be insufficient to meet current and future needs with the absence of free parking elsewhere in the vicinity of the station. Currently many users park on the streets near the station where parking is free. The proposal for Thanet Parkway station is for a new 320 space car park to be provided which would add significantly to the stock available for park & ride parking in the areas.

3.2 Location

3.2.1 The current proposal for Thanet Parkway is to locate the station between Minster and Ramsgate on the Kent Main Line. The station would be served by the high speed domestic services which run from Margate to St Pancras via Ramsgate and Ashford International.

3.2.2 The proposed site of the new station, Thanet Parkway, is shown in in Figure 3.1, which also shows neighbouring rail stations and the alignment of the East Kent Access Road (EKA). The station site can be easily reached from the EKA which opened fully in May 2012 and is close to the airport.

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[1] National Rail Enquiries Station Information for Ramsgate Station
(http://www.nationalrail.co.uk/stations_destinations/RAM.aspx)
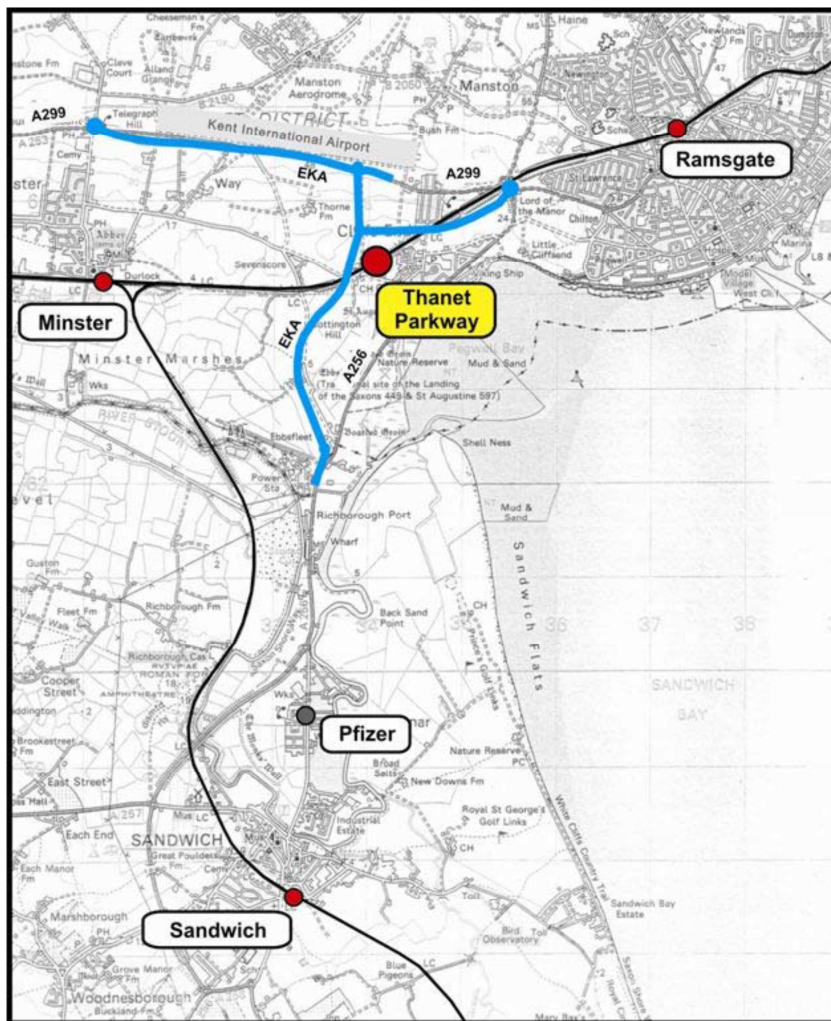
Figure 3.1: Location of Thanet Parkway Station[2]

3.3 Service Pattern

3.3.1 The introduction of the new station would add nearly two minutes to the overall journey time from London to Ramsgate via Canterbury West and from Dover to Ramsgate. This additional time needs to be offset against the journey time improvements noted within Section 2.3, which means that services could call at Thanet Parkway within existing schedules and service patterns. If Thanet Parkway station is built the journey time from the station to Ashford, with the planned line speed improvements, would be 33 minutes. This schedule has been used as the basis for the demand modelling.

3.3.2 There is a possibility that a faster journey time of 29 minutes could be achieved but this is not guaranteed at this stage in the scheme design. This faster time would provide a journey time from Thanet Parkway to Canterbury West of 13 minutes, to Ashford International of 26 minutes and to London Stratford of just under an hour at 59 minutes.

3.3.3 The potential journey times with Thanet Parkway are shown in Table 3.2 below.

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[2] Source: Figure 1 within document 'Pre-Investment Study on Rail Access to Small and Medium Sized Regional Airports'; subtitled 'Commissioning Brief – Consultancy Services to Develop a Business Case for Thanet Parkway Passenger Rail Station', 11th March 2013. Document provided by KCC.
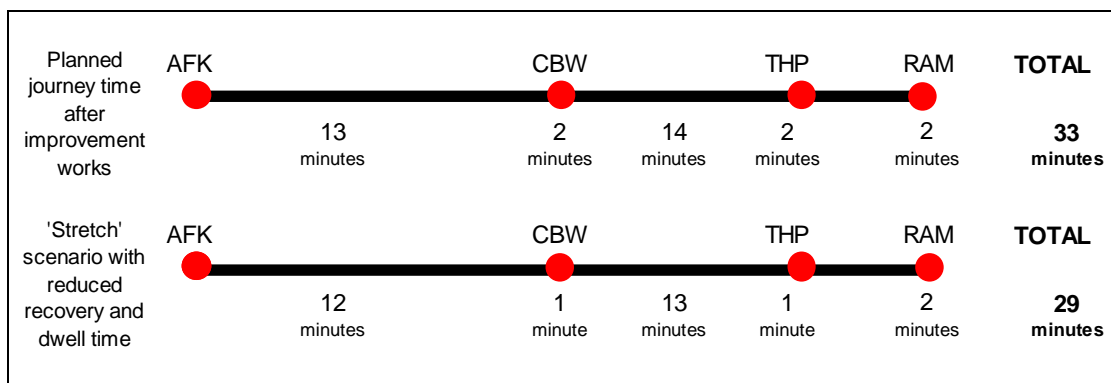
Figure 3.2: Journey times with Thanet Parkway station (Source: Network Rail)

3.4 Capital Costs

3.4.1 A feasibility design for the proposed station site was produced to GRIP stage 2 in January 2011[3] and a cost estimate for the new station was calculated. This has been reviewed by PBA and converted to current (December 2013) prices. The updated results are shown in Table 3.1.

Element	Cost (£m)
Platforms, furniture, passenger security and information systems	3.01
Lifts, stairs and footbridge	0.93
Signalling system modifications	0.70
Car park, road access and landscaping	1.85
Provision of utilities and drainage connections	0.22
Total construction costs	**6.70**
Non construction costs (design, project management, preliminaries)	2.65
Contingency	1.87
TOTAL	**11.2**

Table 3.1: Estimated Capital Cost of Thanet Parkway Station

3.4.2 As shown in the table, the total capital cost of the station is estimated to be £11.2m at current prices.

3.5 Operating Costs

3.5.1 As part of the same exercises, the annual operating costs of the station were also estimated[4] and then updated by PBA and these are summarised in Table 3.2.

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[3] Thanet Parkway Station Proposed Station Technical Note, January 2011, Steer Davies Gleave for Kent County Council, s5.1

[4] Thanet Parkway Station Proposed Station Technical Note, January 2011, Steer Davies Gleave for Kent County Council, s5.4 and Appendix B

Element	Annual Cost
Station – long term charge	£35,000
Utilities – station	£5,000
Utilities – car park	£2,000
Car park enforcement	£67,500
Maintenance – station	£16,200
Maintenance – car park	£10,800
Telecoms	£10,000
TOTAL	**£146,500**

Table 3.2: Estimated Operating Cost of Thanet Parkway Station

3.5.2   Table 3.2 shows the annual operating cost to be circa £0.15m. This is on the basis that the station is unstaffed and that CCTV and Help Point monitoring is conducted remotely by existing resources.

3.5.3   Although it is not intended to staff the station, Table 3.3 shows the indicative costs of staffing, were this decision to be changed.

Staffed Hours	Number of Staff	Annual Cost
0630 – 2100 Monday to Saturday	1	£52,000
0630 – 2100 Monday to Saturday	2	£104,000
0630 – 1330 Monday to Saturday	1	£26,000
0630 – 1330 Monday to Saturday	2	£52,000

Table 3.3: Estimated Staffing Costs of Thanet Parkway Station

3.5.4   It is understood that there is no operating cost associated with stopping existing services at Thanet Parkway as this can be accommodated within existing train schedules. There is therefore no additional rolling stock or train crew resource required.

4　Model Development

4.1　Introduction

4.1.1　Preparation of the business case required the following modelling tasks to be undertaken:

- Development of a Base Year Model

- Development of Future Year Models consisting of the following scenarios:

  1. Background growth scenario – including the natural growth of demand for rail and its competing modes between the base year and the future year. This scenario will be based on an increase in population, housing and employment.

  2. 'Advanced' Do-minimum (East Kent growth plus 'Basic' Do-minimum) scenario – including the impact of East Kent growth, Discovery Park and other developments on the demand growth for rail and its competing modes.

  3. Do-something (with scheme plus 'Advanced' Do-minimum) scenario – this specifically includes the proposed Thanet Parkway.

- Sensitivity Testing for scenario 3, testing air traffic growth, housing and employment development, and rail service assumptions

- Consideration of an alternative option of improving Ramsgate railway station, to test whether improving Ramsgate rail station with increased car parking capacity will be sufficient to cope with the future rail demand without building the proposed Thanet Parkway station.

4.1.2　The methodology used to undertake these tasks is set out in section 4.2.

4.2　Base Year Model Methodology

4.2.1　The demand forecasting approach that has been used is relevant to the stage of the scheme development (GRIP stage 3) and complies with the following guidelines:

- Transport Analysis Guidance (WebTAG Unit A5.3);

- Passenger Demand Forecasting Handbook (PDFH);

- Network Rail;

- Association of Train Operating Companies (ATOC);

- The Office of Rail Regulator (ORR); and

- Industry best standards.

Data Sources

4.2.2　The following data sources were used to build the base year model:

- Ramsgate and Canterbury interview data - passenger interviews were conducted at Ramsgate and Canterbury stations from 0700 to 1900 on a neutral weekday in November 2013. The data was used to establish the trip-distance curve (using home origin postcodes and access mode) for walking/cycling access and trip-time curve for car/other access and to verify top rail destinations found using MOIRA data.

- Ramsgate and Canterbury count data- passenger counts were conducted simultaneously with the passenger interviews in November 2013, again from 0700 to 1900. This data was used to gain the 12-hour boarding count and the 0700-0930 boarding count as detailed in paragraph 4.2.12.

- ITN and TrafficMaster data from Kent CC – used in the OmniTrans road network as detailed in paragraph 4.2.9. It should be noted that the Omnitrans model is not a true highway model in this case but used to extract relevant data in relation to journey times.

- NRTS data - used to expand the 12hr Ramsgate count data to 24hr count data - The Ramsgate survey provided a count of boarding passengers during the time period 0700-1900. Significant numbers board at the station before 0700, so it was necessary to expand the count to provide an estimate of a full 24hr day, using the NRTS data for Ramsgate which covers all time periods.

- National Rail website - for all current rail timetable and fares data, plus station parking spaces and charges.

- Census population data - current 2011 data from the Office of National Statistics was used in the trip element of the trip-distance curves (in the form of trips per thousand resident population), and in the base model's general trip number calculations. Population data projections from the same source were used in future-year trip calculations.

Trip Destinations

4.2.3   Key destinations and access modes were assessed for passengers boarding at Ramsgate. MOIRA output data was used to find that the most popular destinations and the results are shown in Table 4.1.

Destination	% of Total Demand
London	22.19%
Canterbury	16.03%
Herne Bay	9.31%
Birchington on Sea	8.44%
Westgate on Sea	5.80%
Margate	4.32%
Deal	3.03%
Ashford International	2.97%
Dover Priory	2.78%
Sandwich	2.15%
Minster	1.77%
Folkestone	1.72%
Faversham	1.61%

Broadstairs	1.38%
Whitstable	1.22%
Chestfield	1.02%
Other (All Less than 1%)	14.24%

Table 4.1: Principal Destinations for Rail Passengers Boarding at Ramsgate

The proportion of destinations that were to/via London was 27.90%.

4.2.4   As a check, the Ramsgate passenger interview survey, with a sample of 279 boarders, produced a similar result, with 31.90% travelling to/via London.

Mode of Access

4.2.5   The share of access modes was found from the interview survey (for all destinations and time periods) to be as shown in Table 4.2.

Mode of Travel	%
Car (driver)	11.5%
Car (passenger)	9.3%
Bus	6.5%
Walk	71.3%
Cycle	1.4%

Table 4.2: Mode of Access to Ramsgate Station

Calculation of Generalised Cost

4.2.6   The Generalised cost or Generalised Journey Time (GJT) is made up of a number of elements which are listed below and discussed in more detail thereafter, the components of the GJT are :-

- Station rail-service related GJT

- Access time for drive and walk modes

- Rail Fare

- Parking Data

Service Related Generalised Journey Time

4.2.7   The two components of the service-related GJT (generalised journey time) are the mean service interval and transit time, these were calculated for rail travel to London and Canterbury during the morning peak period from each station in the study area.

4.2.8   Current rail timetables were used to calculate the service-related GJT for the situation without Thanet Parkway and a corresponding set was calculated for the situation with Thanet Parkway. This allowed an extra two minutes of transit time for 'Javelin' trains stopping at Thanet Parkway which is consistent with the current extra timetabled time allowed for the

trains stopping at Minster and Sturry. Thanet Parkway departure times were set to reflect location i.e. midway between Ramsgate and Minster (four minutes after Ramsgate for westbound trains).

Car Park Fees

4.2.9   Car park fees for each station in the study area were taken from the National Rail website and the parking cost for each of the study area stations was converted to a time (using the commuting VOT (value of time) of 6.46 £/hr (TAG unit 3.5.6)), The figure used for each station is the half-day-equivalent of monthly charge, plus a penalty factor which is applied if parking is restricted. As the analysis at this stage is concentrated on home based trips, of which the majority are likely to be commuting, it is felt that the use of this VOT is valid at this time.

4.2.10 A further elasticity factor was used at Thanet Parkway to allow for variations in parking charge to be modelled. The factor was taken from the Passenger Demand Forecasting Handbook and based on research undertaken as part of the Strategic Rail Authority Interchange Study, Institute of Transport Studies, Leeds University, May 2001. The study concluded that a £2 per day parking charge is equivalent to 5 minutes of generalised time.

4.2.11 No other PDFH elasticity values were applied within the modelling.

Fares

4.2.12 Fares data also contributed to the generalised cost. Fares were obtained from the National Rail website for journeys to London from each study area station, with and without the use of HS1. For the purpose of calculating catchments, the single-journey equivalents of the yearly season ticket prices were used. In order to derive these, the season ticket prices were divided by 480 to represent single journeys with an allowance for annual leave as used by National rail website.

4.2.13 The fares were converted to generalised minutes using DfT TAG Data Book August 2013 (Value of Time: 6.46 £/hr). For the trip parameters being explicitly modelled (AM Peak boarders, home origin), the vast majority of trips are home-to-work, hence a commuting VOT was used.

Access Time and Distance to Stations

4.2.14 An OmniTrans model was constructed for the purpose of gaining drive times (peak period) and distances (for walk access) from across the study area to each of the rail stations in the study area. A zoning system based on Census geography was used, consisting of 527 single and multiple output areas. A matrix of times and a matrix of distances were copied from OmniTrans into the spreadsheet demand model.

4.2.15 In order to calculate matrices of access times and distances (to each railway station in the study area) a digital road network was imported into OmniTrans. The ITN digital road network was used in conjunction with TrafficMaster mean link speeds (calculated for each link using the TrafficMaster link times for the relevant time periods and days); both sets of data were supplied by Kent CC.

4.2.16 The matrices from OmniTrans were used in conjunction with the generalised costs of using each station (including Thanet Parkway where in operation) to calculate the overall generalised cost (in minutes) of travelling from each zone as follows :-

- Travelling to London, access by car, no Thanet Parkway.

- Travelling to London, access by car, with Thanet Parkway in operation.

- Travelling to London, walk access, no Thanet Parkway.

- Travelling to London, walk access, with Thanet Parkway in operation.

- Travelling to Canterbury, walk access, no Thanet Parkway.

- Travelling to Canterbury, walk access, with Thanet Parkway in operation.

- Factor: x 3.0 – calibrated using current catchment areas (Southeastern and NRTS data)

Catchments

4.2.17   In each case listed in paragraph 4.2.13, for each zone, the zone was deemed to be in the catchment of the boarding station that was calculated to have the lowest generalised cost. Each zone in the study area formed a component part of the catchment area of a particular boarding station if the total GJT for using that station to make a rail trip (to London or non-London destination) is lower than the GJT for using any other station. Catchment areas vary depending on whether a London or a non-London destination is being considered, and also if the access mode is walk/cycle or car/other. The catchment areas are shown and discussed in the figures in Section 5

Calculation of Demand by Distance and Mode

4.2.18   Ramsgate station boarding interview data was used in conjunction with Census data to determine the relative numbers of walk/cycle-access boarders that travel each distance band to reach the station. The bands were as follows;

- Band 1 – 0 to 0.5km

- Band 2 – 0.5 – 1km

- Band 3 – 1 – 1.5km

- Band 4 – 1.5 – 2km

- Band 5 – 2 – 3km

- Band 6 – 3 – 4km

- Band 7 – 4 – 5km

4.2.19   The raw and 'smoothed' curves are shown in Figure 4.1. These show the proportion of trips per thousand of the population for each band.
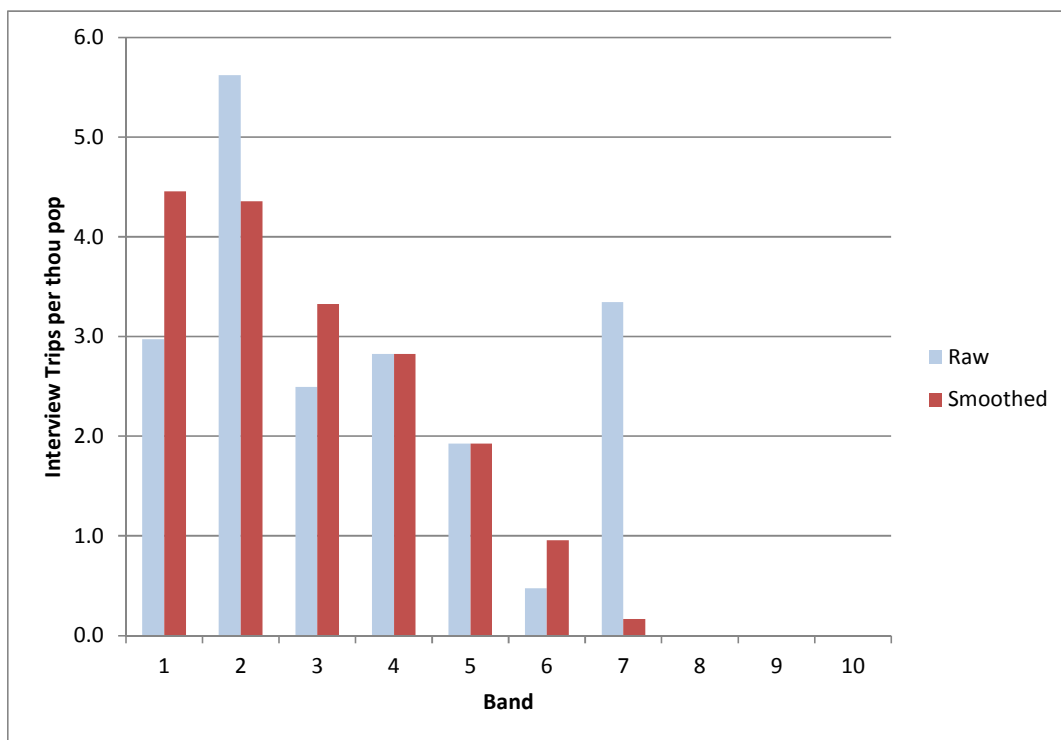
Figure 4.1: Walk Distances Travelled to Ramsgate Station

4.2.20 Similarly, Ramsgate station boarding interview data was used in conjunction with Census data to determine the relative numbers of car/other-access boarders that travel each drive-time band to reach the station. Band thresholds were at 2, 4, 8, 12, 16 and 20 minutes. The raw and 'smoothed' curves are shown in Figure 4.2.
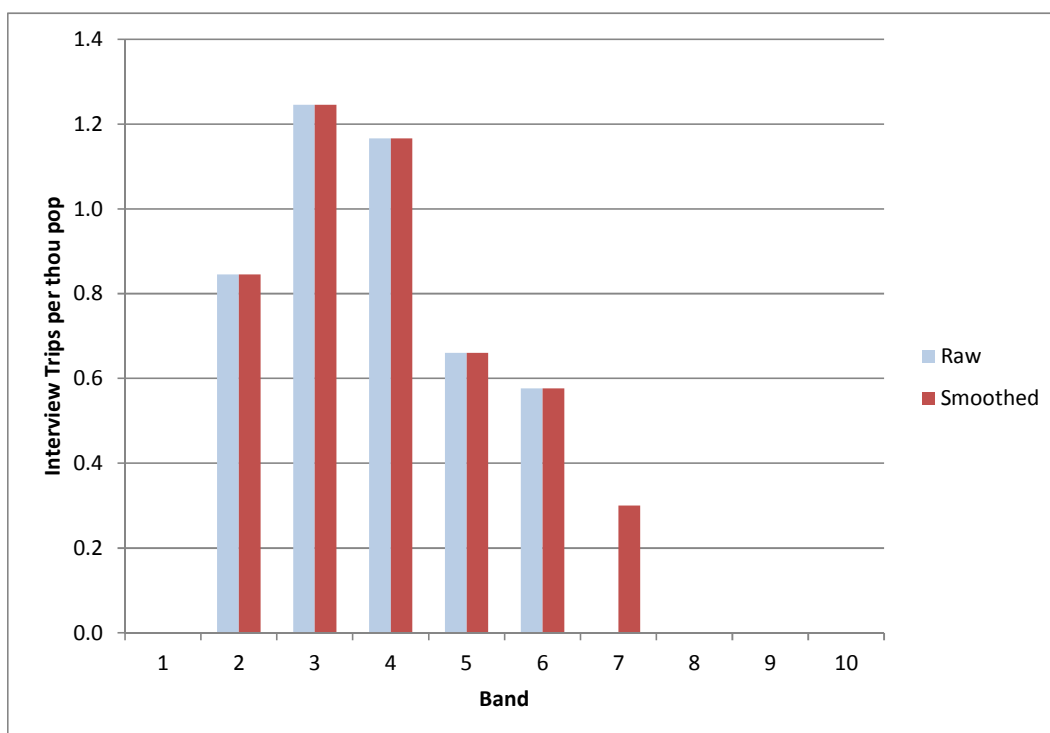
Figure 4.2: Car Drive Distances Travelled to Ramsgate Station

4.2.21 Raw curves are a direct result of plotting the surveyed trips (per thou population) against distance or time. Any survey (or experimental) data causes curves with a natural variation

(random peaks and troughs) from the general curve that the data fits (the trend in the data), due to taking only a sample of the full population dataset and the random element that this entails. Curves are smoothed by fitting them to the general trend in the data (in this case a decay as the time bands increase), whilst ensuring that the total number of passengers that the curves produce is maintained. The raw car data happened to produce a fairly smooth curve that fits the general trend without the need for any 'smoothing', but the raw walk curve did require smoothing.

4.2.22   Ramsgate survey count and interview data was used to calculate the expansion factors required to factor up the appropriate curve totals to the boarding count totals for before and after 0930, for to-London and not-London, and for walk/cycle access and car/other access.

4.2.23   For each zone in the appropriate Ramsgate catchment area (without Thanet Parkway), the curves were applied to the zone residential population and the expansion factors were applied. The expansion factors were derived by using the relative numbers boarding in each time period from the NRTS data to expand up the Ramsgate count data (12 hours only) to a full day.

4.2.24   The total trip numbers output from this modelling method were checked against the count totals to ensure that they matched and provided a good fit in the 2013 base year and hence the basis on which forecasting work could be undertaken.

4.2.25   Conversion factors for determining weekend passenger numbers were calculated using the relative proportion of weekday-to-weekend rail trips made from the National Travel Survey. The conversion factor converted the number of weekday trips to weekend day trips based on the average weekday trips per person and average weekend trips per person from the NRTS data.

4.2.26   The base Ramsgate curves and expansion factors were applied to Minster and Sandwich stations, using their catchment zones in the base case. In each case, a further factor needed to be applied to the curves to ensure the resulting modelled counts were consistent with the estimated year-2013 station boarding counts. These further factors were calculated using the annual ORR entry count for these stations in comparison with that for Ramsgate.

4.3   Summary of Modelling Approach

4.3.1   The methodology used is what is known as a 'Trip Rate' approach and is a recognised method for assessing the likely patronage of a new station such as Thanet Parkway. The approach does not explicitly model mode shift from other modes such as car or bus onto rail, but in essence uses existing data to determine the likely number of trips that could be made by rail from any location by determining a 'trip rate'. Which, in this case is 'the number of trips per thousand of the population' within any zone that would use rail.

4.3.2   The data sources referred to have been used as observed data to determine this trip rate. Existing station data is used (in this case a mixture of station surveys and NRTS data). The curves are based on observed data, unlike traditional modelling, there is no need to undertake a validation and calibration exercise as the outputs from the trip rate curve are bench marked against the observed ORR total number of trips at each station.

4.3.3   It is felt that as this is a recognised industry approach and that the trip rate curves are bench marked against the ORR data that the model is fit for purpose for deriving future demand at Thanet Parkway Station.

4.4   Calculation of Forecast Demand

Methodology

4.4.1   In order to determine the potential demand for all stations, including, Thanet Parkway Station in any given future year, the appropriate drive and walk curves and factors were applied to the

future-year population data. Outputs from a single year were produced to feed into the economic appraisal elements. In this case 2021 was chosen as the forecast year.

4.4.2   For existing stations the trip rate curve produced for the base scenario were used and this was applied in both the 'without Thanet Parkway' and 'with Thanet Parkway' scenarios.

4.4.3   In the 'with Thanet Parkway' test, it has been assumed that the trip rate curve derived for Ramsgate station will be the most appropriate for use in determining the trips per thousand of the population for catchment zones for a new Thanet Parkway station. At this stage no adjustments were made to this curve.

4.4.4   Future year population was derived using the Office of National Statistics projections of population growth. As with any transport appraisal only developments that are committed or 'near certain' should be included within the core appraisal.

4.4.5   As there is no certainty to any future developments within Thanet District explicit developments have not been included, hence the ONS projections have not been adjusted as there is no risk of double counting at this stage. The ONS projections were applied to each output area based on growth at district level e.g. for output areas within Thanet District a factor of 1.00822 per year was applied, This represents a growth of 4.66% between 2011 and 2021.

4.4.6   Adjustments to take account of future GDP growth and car ownership were undertaken within the economic appraisal element.

4.4.7   The curves then output future trips by rail from each station with and without Thanet Parkway in operation and includes the modelled passenger numbers for the proposed Thanet Parkway station itself.

4.4.8   For the 'Ramsgate with Thanet Parkway' case, passenger numbers were adjusted to allow for a loss in passengers due to the change in timetable (additional stop at Thanet Parkway). This was calculated using elasticity on the service-related generalised journey time.

Future Demand from Future Employment Development and Airport Site

4.4.9   Future employment development has been identified around the Manston Airport site and at the Pfizer site north of Sandwich. A search has been undertaken to identify sources of data that may be useful in determining potential demand for rail travel to these sites. A travel survey undertaken at the Pfizer site in 199 and repeated in 2003 after the introduction of a free shuttle bus service from Sandwich station indicated that with the shuttle service in place 0.3% of staff travelled to work by train.

4.4.10   If this is applied to the projected 6000 new jobs[5] in the area around the airport site this would equate to only 18 additional rail trips. It is likely that this number could be increased if a shuttle service was provided from day 1 in order to influence travel patterns early on.

4.4.11   The Omnitrans model has been used to output average speeds for trips to Ramsgate Station and the proposed Thanet Parkway station from the zone that represents Manston Airport site (previous airport terminus location) and a zone to represent the major employment development sites at Manston in the AM and inter peak periods. The outputs are shown in Table 6.1 and 6.2.

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[5] Figure taken from Kent International Airport – Manston, Master Plan, 2009

	Manston Airport site to Ramsgate Station			Manston Business Park to Ramsgate Station		
	Time (Mins)	Distance (KM)	Speed (Km/h)	Time (Mins)	Distance (KM)	Speed (Km/h)
AM Peak	8.17	4.38	32.21	7.18	3.38	28.28
Inter Peak	8.75	4.38	30.05	7.77	3.38	26.08

Table 4.3: Omnitrans outputs – Trips to Ramsgate Station

	Manston Airport Site to Thanet Parkway Station			Manston Business Park to Thanet Parkway Station		
	Time (Mins)	Distance (KM)	Speed (Km/h)	Time (Mins)	Distance (KM)	Speed (Km/h)
AM Peak	7.80	4.88	37.56	7.02	3.97	33.95
Inter Peak	7.70	4.88	38.04	7.01	4.28	36.61

Table 4.4: Omnitrans outputs – Trips to Thanet Parkway Station

4.4.12 The comparison shows that, although Thanet Parkway Station is slightly further from the airport site and nearer to the business park zone used, the journey time to both is slightly less when compared to Ramsgate Station.

4.4.13 There would be a slight benefit to rail users coming from the west if Thanet Parkway were to be developed, as they would experience a slight time saving as the rail journey time would be less.

4.4.14 The cost of running a shuttle bus service is not likely to be any different if it was to operate from Thanet Parkway or Ramsgate as the journey times and distances extracted from the Omnitrans model show these to be similar for both stations.

4.4.15 Given the level of uncertainty as to the future of the airport site, with it having been closed in late 2014, it is difficult to predict the potential benefit and impact on passenger numbers it will have on Thanet Parkway Station. Also, given uncertainty with the employment development at this stage these cannot be included in the business case to DfT as only committed development should be included.

5 Model Forecast Outputs

5.1 Demand Outputs

5.1.1 Summary results sheets were produced for two scenarios; without a parking charge and with a parking charge (of £3.50 per day) at Thanet Parkway station. This is equivalent to a monthly parking charge of £70, which is in keeping (but slightly higher) than the Ramsgate station parking charge; currently £63. Modelling was conducted on the basis of monthly parking tickets because the majority of car park users are all-day, commuters. A differential level of charging would have been irrelevant to these rail users.

5.1.2 Resulting outbound passenger boarding numbers were output for 'before 0930', 'after 0930' and at the weekend (as a mean 24hr total). Results were presented for travel to London and to other destinations separately, for the following and are included in full in Appendix A for 2021 and 2031 and a summary is provided in Section 5.2:

- Total boarding at Thanet Parkway

- TP boarders abstracted from other stations

- Newly generated TP boarders

- Total boarding at Ramsgate, Minster and Sandwich stations (separately, with TP operational)

- Ramsgate reduction in passengers due to TP: switching directly to TP

- Ramsgate reduction in passengers due to TP: additional loss due to increase in journey time (extra stop)

- Minster reduction in passengers due to TP: switching directly to TP

- Sandwich reduction in passengers due to TP: switching directly to TP

- Car Park Demand

5.1.3 The estimated demand for parking at Thanet Parkway station car park was calculated using the modelled passenger numbers by car/other in conjunction with the proportion driving out of drive-plus-lift from the Ramsgate interview data.

5.1.4 For the Thanet Parkway boarding passengers, the numbers were broken down by ticket type; into season, full and reduced fare tickets, with and without HS1 (for London trips). This used the times at which the first off-peak fare trains depart Ramsgate (different for HS1 and non-HS1), in conjunction with Ramsgate count data and the HS1/non-HS1 split from the interview data.

5.1.5 Fares from Ramsgate by ticket type (season, full, reduced), with and without HS1 (for London) were obtained from the National Rail website for trips to London and all the most popular non-London destinations; a weighted mean set of fares was then calculated for non-London destinations.

5.1.6 Numbers by ticket type were used in conjunction with fares to calculate an estimate of the daily revenue generated by the proposed Thanet Parkway station.

5.1.7 The results of the modelling have been used to prepare the economic and financial cases set out in chapters 6 and 7.

5.2   Results Summary

Passenger Demand – Thanet Parkway

5.2.1   The demand spreadsheet has the capability to output demand for any year. The demand for use for Thanet Parkway in 2021 and 2031, with and without a parking charge applied are shown in Tables 5.1 to 5.4. The annual demand is based on annualisation factors of 253 weekdays and 109 weekend days.

	Before 09:30	After 09:30	24-Hour Total	Weekend 24- our	Annual Demand
To London – Abstracted	56	42	99	39	29298
To London –New	26	23	49	21	14686
To Other – Abstracted	95	36	131	34	36849
To Other - New	56	32	88	30	25534
Abstracted – Total	151	78	229	73	65894
New - Total	85	55	137	51	40220
TOTAL TRIPS	236	133	366	124	106114

Table 5.1: Thanet Parkway Trips – 2021- With Parking Charge

	Before 09:30	After 09:30	24-Hour Total	Weekend – 24-Hour	Annual Demand
To London – Abstracted	70	52	122	48	36098
To London –New	28	25	53	23	15916
To Other – Abstracted	115	43	157	39	43972
To Other - New	60	33	94	31	27161
Abstracted – Total	185	94	279	87	80070
New - Total	89	58	147	54	43077
TOTAL TRIPS	274	152	426	141	123147

Table 5.2: Thanet Parkway Trips – 2021- No Parking Charge

	Before 09:30	After 09:30	24-Hour Total	Weekend 24 - Hour	Annual Demand
To London – Abstracted	61	45	106	42	31396
To London –New	28	25	53	23	15916
To Other – Abstracted	102	39	141	36	39597
To Other - New	61	35	96	32	27776
Abstracted – Total	163	84	247	78	70993
New - Total	89	59	148	55	43439
TOTAL TRIPS	252	143	395	132	114432

Table 5.3: Thanet Parkway Trips – 2031- With Parking Charge

5.2.2	Before 09:30	After 09:30	24-Hour Total	Weekend - 24 - Hour	Annual Demand
To London – Abstracted	75	56	131	52	38811
To London –New	31	27	57	25	17146
To Other – Abstracted	124	46	170	42	47588
To Other - New	65	36	101	33	29150
Abstracted – Total	199	102	301	94	86399
New - Total	96	63	159	58	46549
TOTAL TRIPS	295	165	460	152	132948

Table 5.4: Thanet Parkway Trips – 2031- No Parking Charge

5.2.3   The 2021 results indicate that without a parking charge in place at Thanet Parkway Station, the number of potential passenger's increases by just over 16.0% annually from approximately 106,000 to 123,147. The 2031 results show a 16.2% increase. Putting this into context, this compares with current annual passenger numbers at Ramsgate station of over 400,000 passengers per annum.

Car Park Demand

5.2.4   Car park demand for Thanet Parkway station has been determined from the spreadsheet by taking the proportion of drivers estimated from the Ramsgate survey who drive rather than get a lift. The car park demand for weekdays (the higher demand) is shown in 5 year intervals with and without the parking charge in place in Table 5.5.

	2021	2026	2031
No Parking Charge	207	215	223
With Parking Charge	171	178	184

Table 5.5 Car Park Demand

5.2.5   The analysis indicates that the total number of parking spaces required at Thanet Parkway would be in the region of 207 in 2021, rising to 223 by 2031.

Abstraction from Ramsgate and Minster Stations

5.2.6   The demand model extracts the number of abstracted trips using Thanet Parkway who previously used Ramsgate or Minster Stations. At Ramsgate, there is also some loss of passengers as a result of the extended journey times. These would be assumed to no longer travel or use a different mode. The number of annual trips abstracted in 2021, along with passenger number predictions for these stations is shown in Table 5.6 and 5.7 for the with and without parking charge at Thanet Parkway respectively.

	Abstracted	Lost	Total Lost	Trips with Thanet Parkway	% Reduction in Trips
Ramsgate	46,094	15,155	61,249	393,357	15.35
Minster	3,893	-	3,893	26,092	12.98

Table 5.6 Rail Trips Lost with Thanet Parkway – With Parking Charge

	Abstracted	Lost	Total Lost	Trips with Thanet Parkway	% Reduction in Trips
Ramsgate	58,200	14,749	72,949	381,250	16.06
Minster	3,893	-	3,893	26,092	12.98

Table 5.7 Rail Trips Lost with Thanet Parkway – Without Parking Charge

5.2.7   The figures show that the percentage loss of passengers is between 15 and 16% at Ramsgate and just fewer than 13% at Minster. The reduction at Minster would exacerbate the recent trend of decreasing demand identified by ORR: total trips at Minster fell by 12% between 2011-12 and 2012-13[6]. Although the station is unstaffed, and therefore has low operating costs, the relationship between income and expenditure at Minster would need to be monitored.

Catchment Maps

5.2.8   Figures 5.1 to 5.5 illustrate the impact of opening a new Thanet Parkway station on the catchment areas for stations in East Kent. The areas where Thanet Parkway would derive its demand from are the yellow areas on the with Thanet Parkway maps.

5.2.9   Figures 5.1 and 5.2 shows the current position for boarding station catchment area for access by car and by walk/cycle respectively.

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[6] Station Usage 2012-13 Data, Office of Rail Regulator

5.2.10　Figures 5.3 and 5.4 show the boarding station catchment area for access by car with Thanet Parkway. Figure 5.3 shows the catchment with a charge for parking and Figure 5.4 shows this with free parking. Figure 5.5 shows the walk/cycle access catchment area.

5.2.11　To demonstrate how geographic catchment areas relate to potential catchment population, Figure 5.6 shows population density in the study area.

5.2.12　Figure 5.1 shows the situation with No Thanet Parkway for access by car and trips to London. Each station has a catchment area in the vicinity of the station, but (as you would expect) some are skewed so that passengers are using the stations that are in the London direction from their home origins (due to calculations taking into account both the access and the transit aspects of journey time). This is particularly evident with Margate's catchment.

5.2.13　Ramsgate's catchment area includes areas that are nearer Minster station, but the superior rail service from Ramsgate has the effect of making Ramsgate the optimum station to use from these areas.

5.2.14　Figure 5.2 and Figure 5.5 show Walk & cycle access with and without Thanet Parkway respectively. The relatively slow access mode of walking (or cycling) has the effect of making the access time the main factor in determining catchment areas. Hence nearest stations (using the road network) are determining the catchment areas.

5.2.15　Figure 5.3 and Figure 5.4 show access by car; with Thanet Parkway for 'with parking charge' and 'free parking' scenarios respectively. Similar to the Ramsgate case in Figure 5.1 above, Thanet Parkway is proposed to have a good level of service compared to Minster, so TP's catchment area includes areas nearer to Minster station. This effect is made greater by good access to Thanet Parkway from the strategic road network and the provision of adequate parking. The result is that the periphery of TP's catchment includes areas nearer (as the crow flies) to another station, including Ramsgate, Margate and Sandwich. Much of the periphery of TP's catchment area is, however, fairly sparsely populated (as comparison with Figure 5.6 shows), with the exception of the area near to Ramsgate.
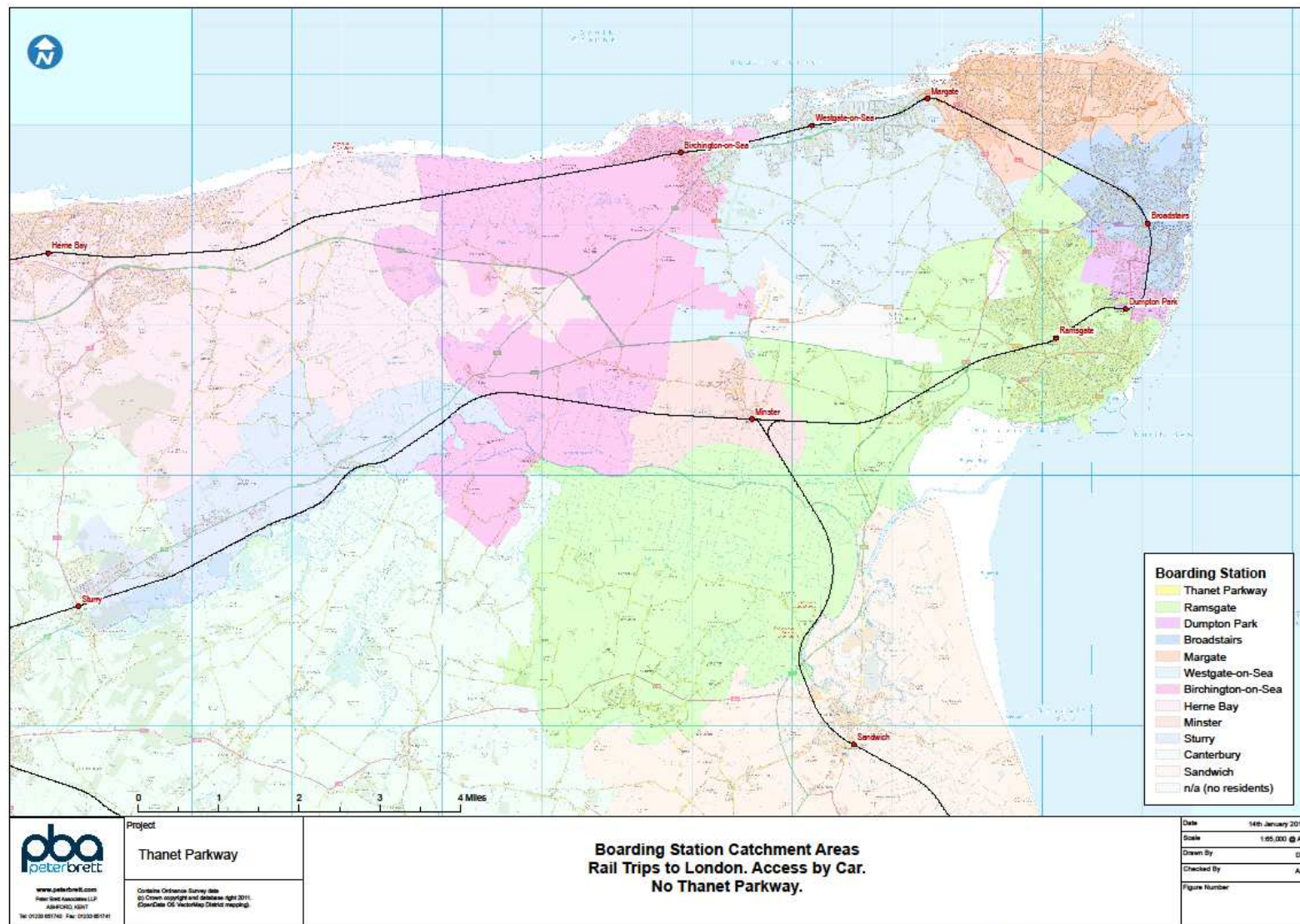
Figure 5.1: Catchment without Thanet Parkway – Access by Car
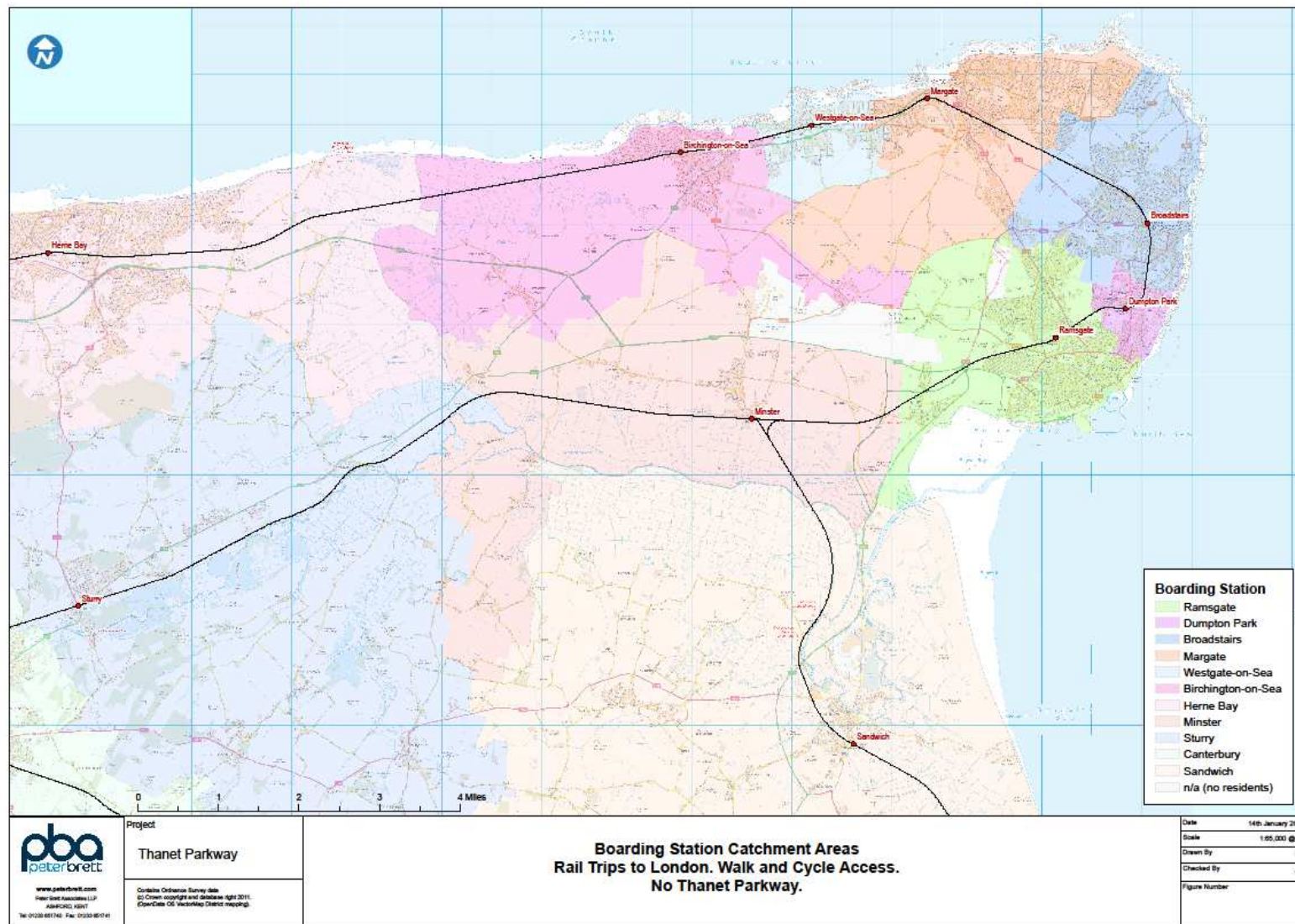
Figure 5.2: Catchment without Thanet Parkway – Access by Walk/Cycle

Figure 5.3: Catchment with Thanet Parkway – Access by Car (Parking Charged)
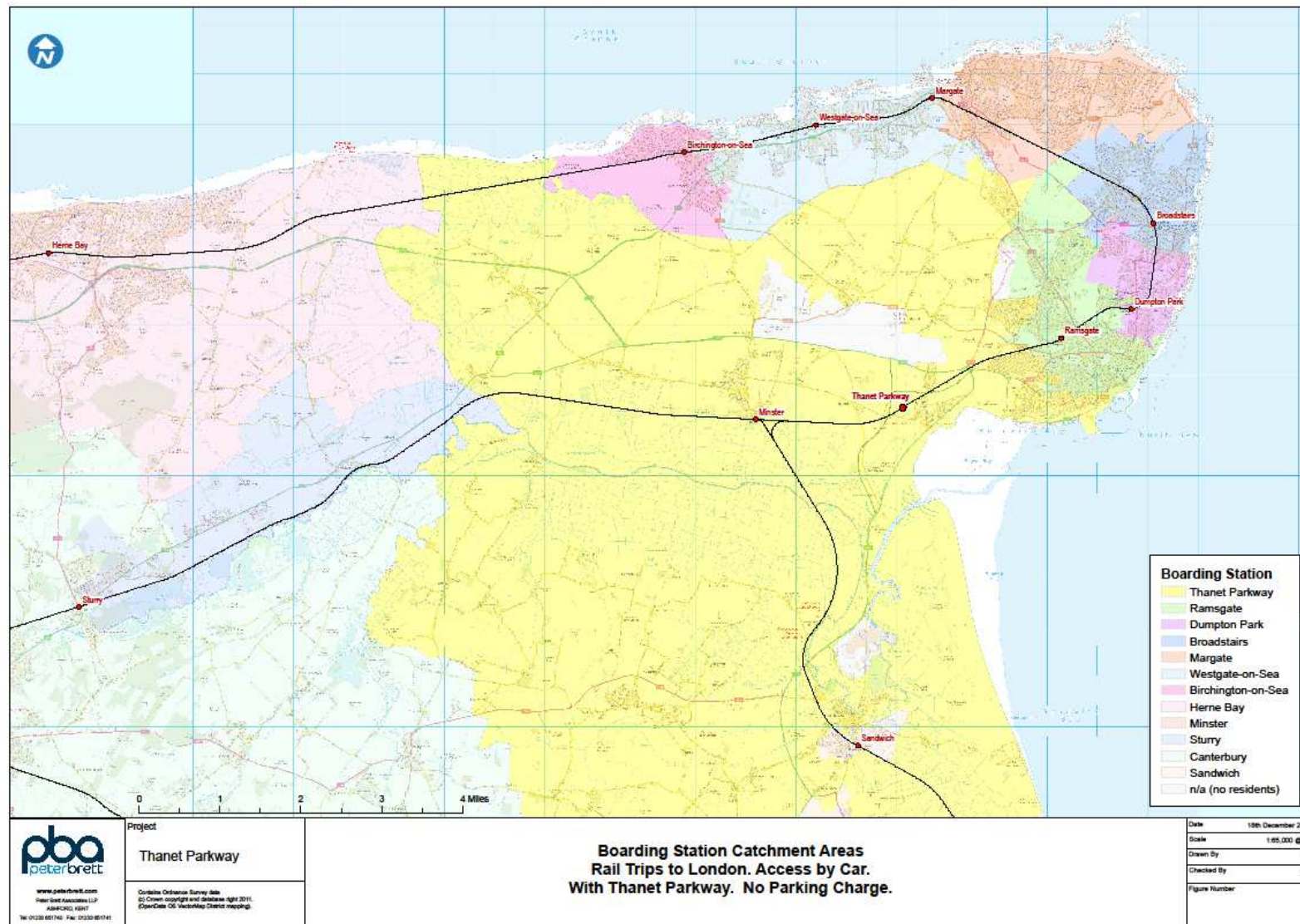
Figure 5.4: Catchment with Thanet Parkway – Access by Car (Parking Free)
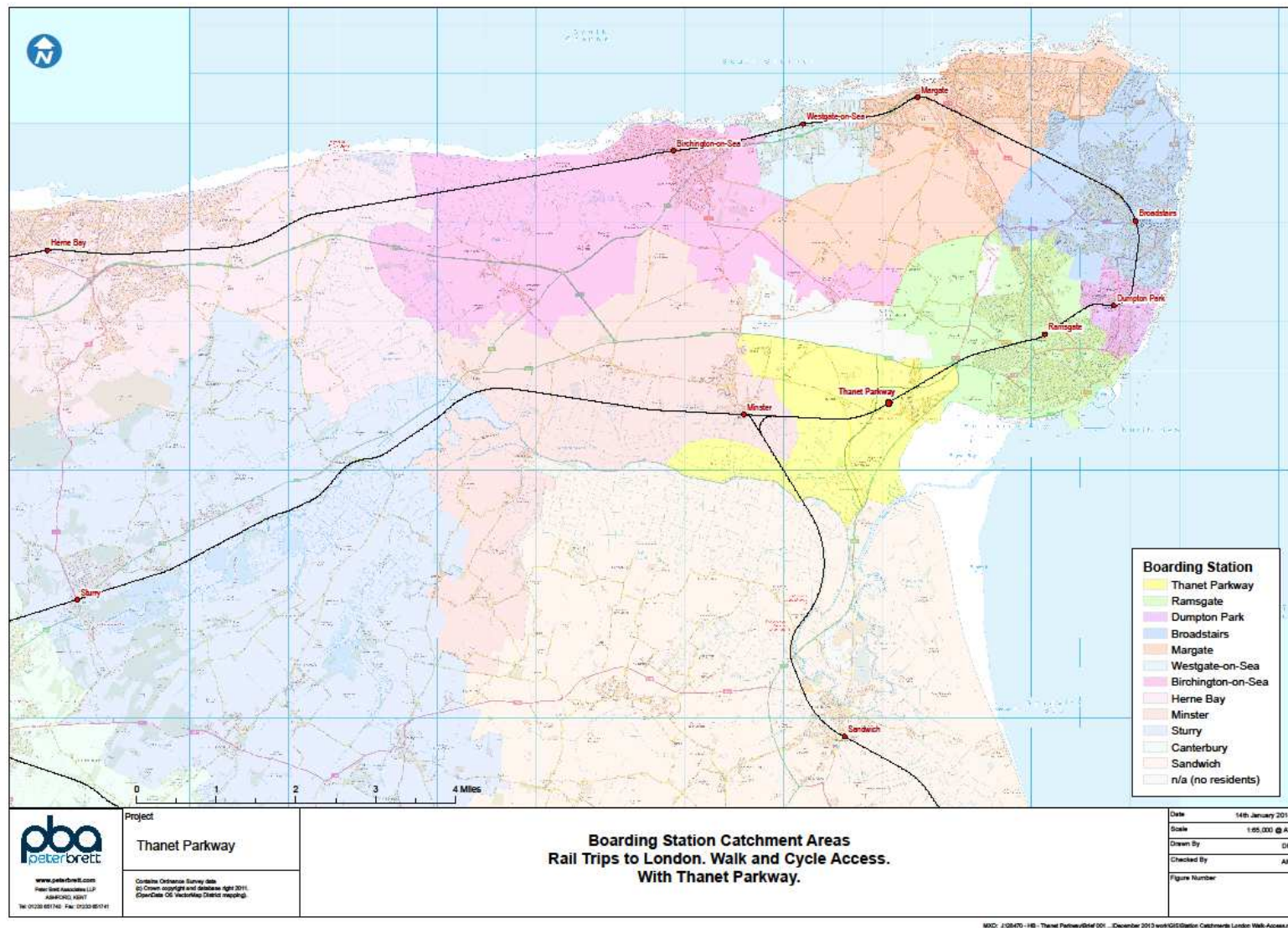
Figure 5.5: Catchment with Thanet Parkway – Access by Walk/Cycle
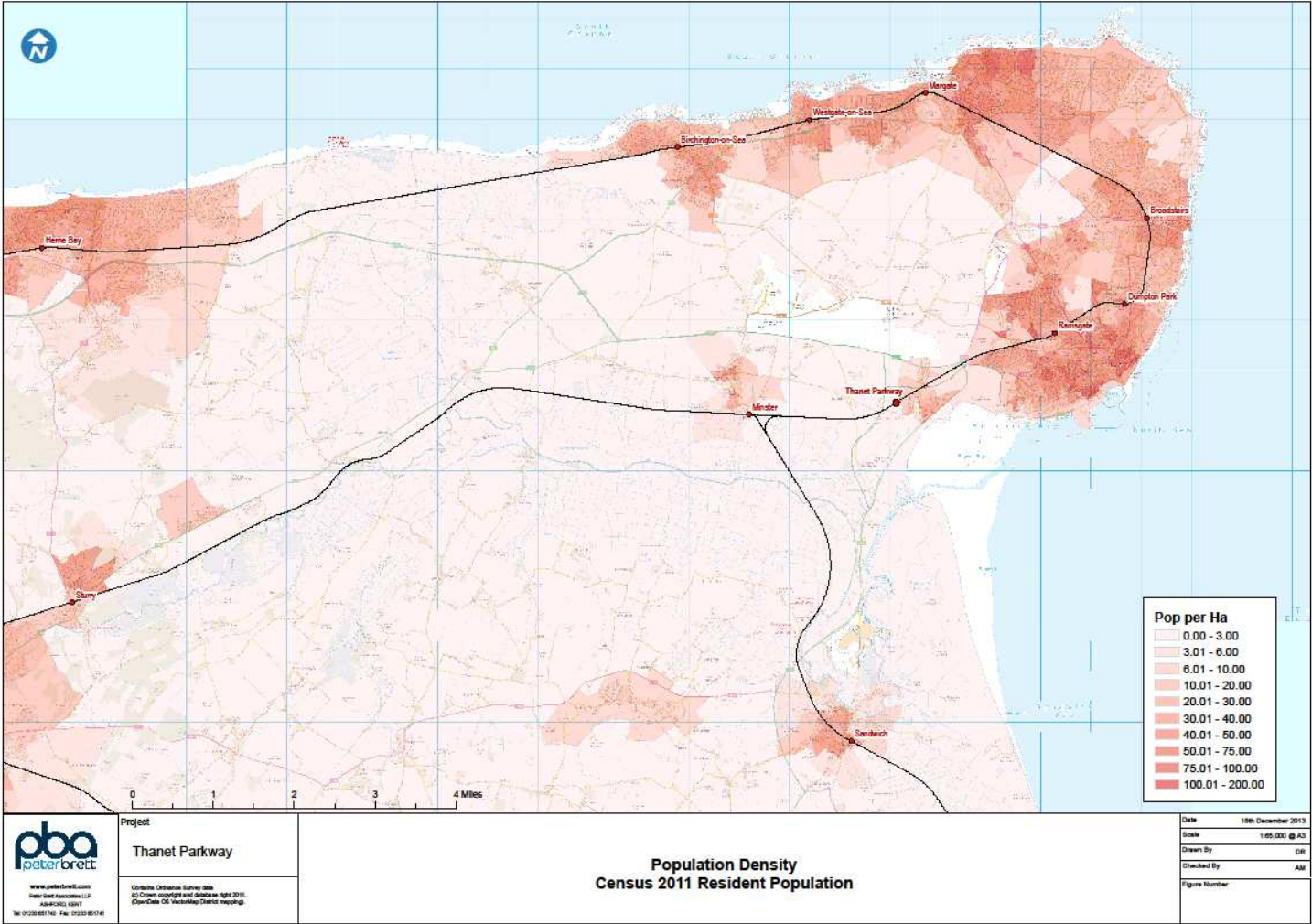
Figure 5.6: Population Density in Thanet

6 Enhanced Ramsgate Station Option

6.1 Introduction

6.1.1 An alternative short-medium term option to the construction of a new station at Manston is to enhance facilities at Ramsgate station. The station would need to be able to accommodate the additional demand generated by planned development in the area (as set out in chapter 3) as well as potential airport growth. To consider whether this is feasible, further modelling has been undertaken to assess the scale of increased trip making and the implications for infrastructure and operations at Ramsgate. The outcomes of this assessment have demonstrated that the enhanced Ramsgate Station is not a favourable, future-proof option due to the limited car parking capacity and congestion issues at and around the station.

6.2 Future Demand for Parking at Ramsgate (With and Without Thanet Parkway)

6.2.1 In order to understand the demand on parking at Ramsgate station if Thanet Parkway were not to be built, sensitivity analysis has been undertaken. The total demand for Ramsgate for the 'with' and 'without' Thanet Parkway scenarios has been extracted from the spreadsheet demand model.

6.2.2 It should also be noted that no specific future development has been assumed in this demand forecast. New trips by car to the station will be generated through natural population growth and new housing developments. The Thanet Local Plan is at a very early stage and it has not been possible to determine any specific residential development allocations that may influence future demand directly. As a result, uniform growth across the model area has been assumed in the demand forecast.

6.2.3 As stated in Section 5, from the car parking demand viewpoint, employment development at Manston is unlikely to have an impact on parking at Ramsgate as there is no real reason why there would be a need to drive to the station.

6.2.4 A factor taken from the Ramsgate survey has been derived to calculate the total number of passengers that use Ramsgate station who drive. This assumes that 66.7% of those that arrive by car at Ramsgate currently drive to the station before 9:30AM and 48.5% after 9:30AM and would therefore require a parking space. The total passengers and those assumed to drive at opening year for the 'with' and 'without' Thanet Parkway scenarios is shown in Table 6.1.

Scenario	Total Passengers	Assumed Parking Demand
With Thanet Parkway (with Charge)	320	214
Without Thanet Parkway	475	289

Table 6.1: Assumed Parking Demand at Ramsgate – 2021 Weekday

6.2.5 Table 6.1 shows that under a 'without Thanet Parkway' scenario the car parking demand at Ramsgate by 2021 will be greater than under a 'with Thanet Parkway' scenario. This higher car parking demand would create more highway trips to/from the station, affecting residents living near the station in terms of increasing local congestion, accidents and air quality.

6.2.6   Ramsgate station currently has 44 parking spaces, including 2 accessible spaces7. The numbers indicate that demand appears to be well above supply. It is likely that a large number of those that currently drive to the station do not use the car park, where they have to pay, but park on residential streets around the station where there are currently no restrictions. It is therefore difficult to verify these demand figures over and above using the data available from the Ramsgate station survey, where people gave there access mode.

6.2.7   It is unlikely that employment around the airport or any newly generated trips to the airport will have any impact on car park demand at Ramsgate as it is unlikely that anyone would drive to the stations given the short distance between the station and the proposed employment sites. If staff were to drive, they would go straight to the new development.

6.2.8   However employment generated trips would needs to access the station via public transport and taxis that will require further improvements around Ramsgate station to avoid congestion and road safety issues in the area.

6.2.9   Table 6.2 provides details of current day times and speeds extracted from the Omnitrans model. As it was mentioned earlier, this model is built using ITN and TrafficMaster data to extract drive times (peak period) and distances (for walk access) from across the study area to each of the rail stations in the study area. This model is not a true highway model, as it does neither estimate forecast future passenger demand nor future highway speed.

	Manston Airport to Ramsgate Station			Manston Business Park to Ramsgate Station		
	Time (Mins)	Distance (KM)	Speed (Km/h)	Time (Mins)	Distance (KM)	Speed (Km/h)
AM Peak	8.17	4.38	32.21	7.18	3.38	28.28
Inter Peak	8.75	4.38	30.05	7.77	3.38	26.08

Table 6.2: Omnitrans outputs – Trips to Ramsgate Station

6.2.10   The data provided in table 6.2 above shows that the inter peak speeds are lower than that for the AM peak. The results do seem to indicate that there are currently no major congestion issues from the airport/business park to Ramsgate station.

6.2.11   If the airport growth and associated growth in employment were to be realised and the way forward were to provide an enhanced Ramsgate station, there would be a need to improve facilities for public transport and taxis, as these would be required for the final part of the journey for passengers to and from these sites to the station.

6.2.12   The Omnitrans model is unable to forecast the future traffic impact, as a result it is not possible to assess the impact of future car trip attracted to Ramsgate station on the highway network or to identify any highway interventions which may be required.

6.2.13   The results of the demand assessment show that in 2021 there could potentially be a need to provide 289 car park spaces at Ramsgate station to meet the demand. Since the demand forecast does not consider the future employment development in Thanet and Dover (especially Discovery Park Enterprise Zone), the provision of 289 car park spaces at Ramsgate provides a solution which is not long term and future-proof.

6.2.14   Future housing growth in and around Ramsgate will generate new demand for car parking at Ramsgate. At this stage a uniform distribution of new housing and natural population growth

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7 National Rail Enquiries Station Information for Ramsgate Station

have been accounted for as there is no certainty as to actual location of residential development. There is a strong likelihood that residential development will be identified in the revised Thanet Local Plan which will increase passenger demand and access to the station by car, requiring further car parking provision at the station. Development of a car park to meet the predicted demands from background growth is likely to only provide a short term solution as growth in East Kent puts added pressure on demand for parking.

6.3 Land Availability and Demand for Parking at Ramsgate

6.3.1 The future demand assessment show that there could potentially be a need to provide at least 289 car park spaces at Ramsgate station to meet the demand in 2021. Land availability for the provision of sufficient car parking is a constraint on this option. The following options are investigated to see whether there is sufficient land to build a car park:

- Replace the existing station car park with a multi-storey car park

- Build a multi-storey car park at Network Rail Maintenance Depot

- Build a car park at Warre Recreation Ground.

6.3.2 The area around the station is very constrained by virtue of it being within a residential area and Ramsgate station currently has 44 parking spaces, including 2 accessible spaces.

6.3.3 Since the station is located within a residential area, currently users of the station park within the residential areas. The future increased demand will put pressure on this and may lead to conflict between the needs of residents and station users. Increased traffic in these residential streets is also likely to impact on air quality and safety.

Figure 6.1: Car Parking Provision at Ramsgate Railway Station

6.3.4   The first option explores whether the existing station car park can be converted in to a multi-storey car park. This option would be convenient for passengers from the station accessibility viewpoint, but can be affected by congestion at peak periods. This option will create a strong opposition from local residents affecting their privacy and well-being both during and post construction. This option will severally affect local safety situation for walking (especially for disabled and elderly people) and cycling (especially young people) in the area.

6.3.5   The second option which has been investigated is for additional car parking facilities to be provided at a site owned by Network Rail within their rail maintenance facility. The identified area is currently being used by Network Work staff at the Maintenance Depot and HGVs accessing the Depot to deliver goods. The access to the Depot is secured and is not open to the public.

Figure 6.2: Existing Car Parking Provision at Ramsgate Maintenance Depot

6.3.6   The early discussion with Network Rail indicates that the provision of a multi-storey car park at this site is feasible from the engineering point of view. However, the secure access and car parking for Network Rail staff and HGV movement should be maintained when a new car park is built at the site, which would increase the car park construction cost substantially.

6.3.7   If a multi-storey car park is provided at this site then the privacy and well-being of adjacent residents would be affected. Furthermore, the highway network and roundabouts in the area need to be improved to cater the additional trips due to station car parking.

6.3.8   To access the entrance station and passenger platforms from the proposed car park site two options have been identified.

6.3.9   One option would be to deliver improvements to the pedestrian footpath, along Newington Road and Warre Recreation Ground. This route would take 7-10 minute walk. This pedestrian footpath through the Warre Recreation Ground, parallel to the railway line, is unlikely to be favourable with passengers due to the walking time, indirectness of route and potential safety issues.

6.3.10 Alternatively a pedestrian footbridge could be installed to create a more direct route between the identified car park site and the station entrance and platforms. The cost of this option has not been estimated as part of this report, but is unlikely to be feasible, as there are a number of Network Rail buildings such as an inspection shed and cleaning shed situated between the proposed car park site and passenger service platforms.

6.3.11 The final and most controversial option is to build a car park at Warre Recreation Ground. There is sufficient area available to build a car park, but some work needs to be undertaken to provide access to the site. In addition, the highway network requires improvements to deal with generated trips due to a car park.
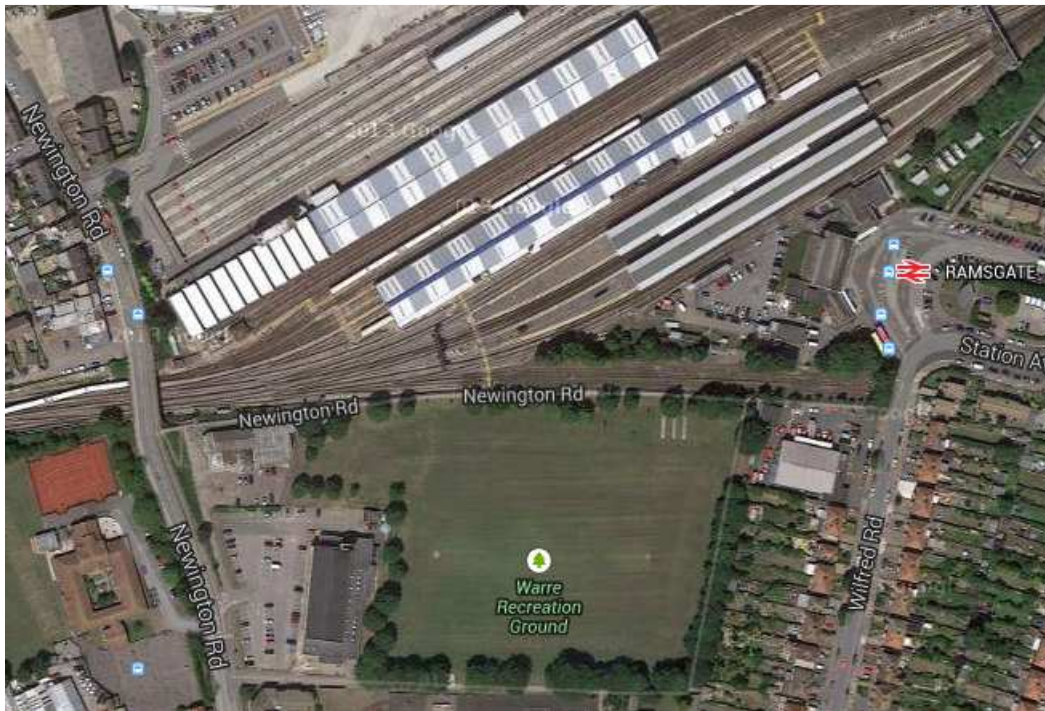
Figure 6.3: Warre Recreational Ground, Ramsgate

6.3.12 The cost of building a car park for 289 vehicles, landscaping, land costs, maintenance and operating costs, and highway network improvements cost for all above options has not been estimated.

6.3.13 As a result, no suitable location has been identified to provide a 289 space car park for providing a short to medium term solution to cater for natural population growth, let alone accounting for a uniform housing growth and potential increased car ownership.

6.4   Conclusion

6.4.1   The demand forecast is based on pessimistic assumptions: (i)- no consideration of future development in Thanet and Dover districts; (ii)- a uniform distribution of new housing development in Thanet is included in the forecast; and (iii)- no change in car ownership level.

6.4.2   The Ramsgate enhanced option would require significant investment in new car park facilities at the station to meet growing demand. The results indicate that a car park of 289 space would be required to provide a short-medium term solution until 2021, assuming some restriction is put on on-street parking which is currently freely available.

6.4.3   This assessment of the demand does not account for future housing growth and potential increased car ownership; the likely impact of which would be to increase the demand for car parking space.

6.4.4   No clear option for the provision of land to develop adequate car parking capacity at an enhanced Ramsgate option is identified, due to the railway station being situated within a residential area.

6.4.5   If employment and airport growth were realised, there would be a need to improve interchange facilities at the station, but given the uncertainty in either at the moment it is unclear what this may involve.

6.4.6   Whilst the Omnitrans model cannot forecast the future traffic impacts of this option, it is anticipated that the demand for Ramsgate station and the impact of residential development will put added pressure on the highway network, air quality and safety.

6.4.7   This option for improvements to Ramsgate station will not provide a sustainable long term solution to facilitate passenger demand. Options to increase the level of car parking would only provide a short term solution and no suitable site has been identified for additional car park facilities.

7 Economic Analysis

7.1 Introduction

7.1.1 If central government funds are required to contribute towards the cost of building the station the DfT will require that the station has a strong economic case as well as a strong financial case. The economic case for the station will include items such as the value of reduced journey times and the value of a reduction in car kilometres driven if people transfer from car to rail. For the DfT the assessment of the railway station will need to be made in accordance to the five cases model. This model, as it applies to new railway stations, is described below:

- Strategic Case – what the objectives and criteria selection of this proposed new or re-opened station are and why it is considered the best way of meeting local transport objectives and addressing transport issues in the area.

- Economic Case – what is the economic business case for the station. This is stated in terms of the benefit cost ratio and the net present value of the station. The station should be appraised over 60 years and the resulting socio-economic benefit cost ratio should be greater than 1.5.

- Financial Case – any new station should comply with DfT policy that it should cover its on-going costs from newly generated income. This evidence is provided by setting operating costs (including station access charge), generated income, revenue abstracted from neighbouring stations, and revenue lost through longer journey times, for 30 years. Details are also required about the repair, maintenance and ongoing operational costs that will be attributed to the station.

- Commercial Case – this case covers details as to how the station will be procured and built and the sources of funding for the construction costs of the station. Details are also required on the revenue streams which will cover the operation, maintenance, repairs and renewals required for the station.

- Management Case – this includes evidence that the station can be delivered in engineering, operational and planning terms and that it has the full support of Network Rail, the train operating company whose trains are planned to call there and whichever train operating company will operate the station.

7.2 Methodology

7.2.1 The economic analysis has been undertaken using a spreadsheet based model that covers a 60 year appraisal period. The model is based on a version previously approved by Network Rail. The model considers the following:

- Rail fares income – derived from the demand forecasting for peak, off-peak and weekend trips and converted to revenue by using current (December 2013) fares with a yield application applied. Income comprises three sources; users new to the rail network, users who have switched from a nearby station, and users who no longer travel. The net generated revenue, i.e. new users' income less lost users' income is used for the appraisal. As most abstracted trips are from Ramsgate station, it is assumed within the assessment that there will be no change in fare paid at this stage. For trips lost to the rail network, the loss of income from these travellers is accounted for within the assessment.

- Capital costs – of station and car park construction using calculations from previous work and updated to December 2013 prices.

- Operating and maintenance costs – of station and car park, again using calculations from previous work and updated to December 2013 prices.

- User benefits – those who transfer to use the new station do so in response to a generalised cost advantage which counts as a user benefit; newly generated trips are assumed to accrue half of this average benefit (in line with the rule-of-a-half). This is partially offset by those who continue to travel through from Thanet who suffer a 2 minute disbenefit as a result of the additional station stop. Those who (at the margin) cease to travel are counted as suffering half this disbenefit on the same rule-of-a-half principle.

- Non user benefits or Marginal External Costs – savings in the costs of congestion, infrastructure, accidents, local air quality, noise and greenhouse gases due to fewer trips being made by car. The analysis also includes loss of indirect taxation through reduced fuel use.

7.2.2 Capital costs include a contingency of £1.87m as indicated in table 3.1 and are also subject to optimism bias at 40% and to an annual inflation rate of 1% for increase in station costs.

7.2.3 Operation costs have included a 1% per annum optimism bias.

7.2.4 Revenue has been adjusted for the impact of future rail passenger growth (based upon future car ownership and GDP and calculated using elasticity factors to reflect these changes taken from PDFH) and to reflect rail fare increases calculated as per WebTAG Data Book A5.3.1 Nov 2014. As per guidance within WebTAG future passenger growth and fare increases are capped after 20 years.

7.2.5 All costs and revenues have been discounted to 2010 prices using a factor of 3.5% for the first 30 years of the project and 3.0% for years 31 to 60.

7.2.6 The economic appraisal generates benefit cost ratios for each option which are discussed in the next section.

7.2.7 Marginal External Costs (infrastructure, accident, local air quality, noise and greenhouse gases) and indirect taxation have been calculated using the spreadsheet within WebTAG 3.9.5. This calculates benefits based on the number of car trips that have been removed from the network. In this case it has been assumed that all new users were previously car drivers. Car occupancy factors have been used to determine the number of cars removed and an estimate of distance travelled on different road types has been made based on the rail trip destination data.

7.3 Results

7.3.1 The economic appraisal has been undertaken for two core scenarios:

- With a daily parking charge of £3.50 at Thanet Parkway

- With free parking at Thanet Parkway

7.3.2 The tables below summarise the results for each scenario. All figures are £m PV except where stated (totals may not sum due to rounding). The costs include an allowance of 40% for optimism bias as per TAG Unit A1.5. The indirect taxation is shown in the tables, but it is included within the total non-user benefits for the calculations.

Economic Appraisal Summary Table – With Parking Charge	£m PV
Costs	
Station Capital Costs	15.7
Station Operating Costs	4.3
Car park Operating Costs	2.5
Total Costs (PVC)	22.5
Benefits	
Additional Rail Revenue	50.8
Parking Revenue	10.2
Kiosk Income	0.6
User Benefits	2.4
Non-User Benefits	2.1
Total Benefits (PVB)	65.8
Indirect Taxation	-1.3
Economic Net Present Value (NPV)	43.3
Benefit: Cost Ratio (BCR)	2.93

Table 7.1: Economic Appraisal (Parking Charged)

Economic Appraisal Summary Table – Without Parking Charge	£m PV
Costs	
Station Capital Costs	15.7
Station Operating Costs	4.3
Car park Operating Costs	0.4
Total Costs (PVC)	20.3
Benefits	
Additional Rail Revenue	55.2
Parking Revenue	0
Kiosk Income	0.6
User Benefits	2.4
Non-User Benefits	2.1
Total Benefits (PVB)	60.3
Indirect Taxation	-1.3
Economic Net Present Value (NPV)	40.0
Benefit: Cost Ratio (BCR)	2.97

Table 7.2: Economic Appraisal (Parking Free)

7.3.3   Table 7.3 repeats the economic analysis for charged parking set out in Table 7.1 without parking revenue.

Economic Appraisal Summary Table – With Parking Charge	£m PV
Costs	
Station Capital Costs	15.7
Station Operating Costs	4.3
Car park Operating Costs	2.5
Total Costs (PVC)	22.5
Benefits	
Additional Rail Revenue	50.8
Parking Revenue	0.0
Kiosk Income	0.6
User Benefits	2.4
Non-User Benefits	2.1
Total Benefits (PVB)	55.6
Indirect Taxation	-1.3
Economic Net Present Value (NPV)	43.3
Benefit: Cost Ratio (BCR)	2.47

Table 7.1: Economic Appraisal (Parking Charged, Parking Income Excluded)

7.4 Commentary

7.4.1 The results show that both options generate a positive Economic Net Present Value which means that the building the station has a net economic benefit to society as a whole.

7.4.2 In terms of Value for Money, as measured by the benefit cost ratio, both options qualify as 'High' value for money as defined by recent DfT guidance[8].

7.4.3 The chief benefit under both scenarios is additional rail revenue which represents the willingness to pay to travel by train for the newly generated rail trips. Time saving benefits to rail passengers (user benefits) and remaining car users (non-user benefits) also contribute to the positive case. The latter also include operating cost savings of reduced congestion.

7.4.4 In comparing the results for the two scenarios, it can be seen that free parking encourages more additional rail users and this leads to higher rail revenue and higher user and non-user benefits, despite the fact that it will encourage more local driving to Thanet Parkway. However, the loss of parking revenue means that the absolute Economic NPV is higher for the charged parking option, although the value for money assessment is slightly better where there is no parking charge.

7.4.5 As this is an initial vfm assessment (as defined in the DfT guidance note) there are limitations to the appraisal. No environmental impacts have been monetised, but the predicted mode shift would drive additional benefits in reduced greenhouse gas emissions and noise and air quality benefits. Furthermore, the new station would provide a regeneration stimulus to the Thanet area and to Ramsgate and Manston in particular. This would therefore reinforce the 'high' value for money assessment.

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[8] Value for Money Assessment: Advice Note for Local Transport Decision Makers Department for Transport. December 2013

8 Commercial Viability

8.1 Introduction

8.1.1 Any new station should comply with DfT policy that it should cover its on-going costs from newly generated income. This evidence is provided by setting operating costs (including station access charge), generated income, revenue abstracted from neighbouring stations, and revenue lost through longer journey times, for 30 years. Details are also required about the repair, maintenance and ongoing operational costs that will be attributed to the station.

8.1.2 The financial viability of the proposal needs to be demonstrated to several separate stakeholders:

- Train Operating Company (TOC) – the provider of the service, in this case Southeastern

- The operator of the station – usually the TOC and again in this case Southeastern

- The car park operator – usually the TOC but in this case likely to be Kent County Council

- Network Rail

- Department for Transport

8.1.3 The requirements of each of these are considered in turn below.

Train Operating Company

8.1.4 The prime concern of the train operating company will be financial. They make a payment to the station operator in return for the right to stop at the station. They will want to be sure that the additional revenue they achieve from calling at the station exceeds the cost of this charge. The additional revenue will come from fares paid by passengers who would not otherwise have used the railway. For example, for Thanet Parkway any passengers who divert from Ramsgate would not produce additional rail revenue. However new passengers such as those who choose to use rail to reach the airport who would otherwise have used a non-rail mode would generate revenue for the train operating company.

8.1.5 The train operating company also makes an allowance for the loss of revenue from any existing passengers who switch away from rail if their journey becomes longer as a result of the train calling at an additional station. For example, rail would become less attractive for people travelling from Ramsgate to Canterbury if there is an additional stop at Thanet Parkway. The Train Operating Company also has to make an allowance for the increased energy used in stopping and starting a train. They will also want to be sure that the extra stop can be accommodated within the timetable and will not require extra train sets or crew. The latter does not apply in the case of Thanet Parkway so the main consideration for the train operating company is whether the net revenue impact of calling at Thanet Parkway is greater than the charge for calling at the station.

8.1.6 The station operator is usually the main train operating company that uses the station. In the case of Thanet Parkway this would be Southeastern. The station operator will wish to be sure that the station access charge exceeds the annual payment they have to make to Network Rail, which covers items such as long term maintenance and the additional costs of running a station such as electricity and water bills and regular cleaning and maintenance. The charge for calling at the station paid by the train operating company has to exceed all of these costs.

Car Park Operator

8.1.7 The car park operator will be concerned to ensure that income from car parking fees is sufficient to cover the cost of operating the car park. Costs are likely to include maintenance, security and enforcement. If no charge is to be made for parking, an alternative funding stream needs to be identified to cover the car park's operating costs.

Network Rail

8.1.8 Network Rail will want to be sure that the station is financially viable and that calling at the station does not jeopardise the reliability of the rail service in the area. They will be particularly concerned that the construction of the station does not unduly interfere with the running of the railway, especially given the presence of a major depot at Ramsgate. They will also consider how the station can be incorporated into the railway regarding issues such as signalling.

Department for Transport

8.1.9 Finally the Department of Transport (DfT) will want assurance that the station covers its operating costs so that it does not become a drain on the railway's finances. This is now DfT policy as it ensures that the price offered in the future by bidders for the rail franchise in the area is not reduced by the requirement to serve the new station.

8.2 Methodology

8.2.1 The methodology adopted for the commercial viability analysis has been to compare annual operating costs and net generated income, separately for the station and the car park. In the former case, it has been established that there is no impact on train operations and therefore the only costs are those associated with the maintenance and operation of the station itself; this has been compared with the net generated fares income, i.e. fares from new users of the rail network less fares lost by users who no longer use rail because of the increased journey time due to the stop at Thanet Parkway.

8.2.2 It is not practicable to undertake separate commercial analyses for the peak and off-peak periods because the station costs are not time-dependent. As the station is unstaffed, the only costs relate to infrastructure , maintenance and the site charge and these would apply regardless of whether the station was in use in only the peak or off-peak or both. There is therefore no rational way of allocating costs by time period. Revenue, of course, can be identified by time period.

8.2.3 For the car park, operating costs have been compared with the income from parking charges where these are levied.

8.3 Results

Station

8.3.1 Tables 8.1 and 8.2 set out the financial viability of Thanet Parkway station, excluding the car park which would be managed separately. Table 8.1 shows performance on the basis of a parking charge of £3.50 per day and Table 8.2 assumes no charge for parking, in each case figures are net present values for a 30 year period.

8.3.2 Costs are based on calculations at 2010 prices, uplifted to 2013 using construction industry inflation indices and then discounted over 30 years to derive net present values.

	£'000
Revenue	
Net passenger fares income	30,794
Kiosk concession	420
Total Revenue	**31,214**
Costs	
Total Costs	**2,814**
Profit/Loss	**28,400**

Table 8.1: Station Viability (Parking Charge of £3.50)

	£'000
Revenue	
Net passenger fares income	33,685
Kiosk concession	420
Total Revenue	**34,105**
Costs	
Total Costs	**2,814**
Profit/Loss	**31,291**

Table 8.2: Station Viability (Parking Free of Charge)

8.3.3 Tables 8.1 and 8.2 show that there is additional fares income over 30 years of £28.4m if parking is charged (at £3.50 per day) and £31.3m if parking is free. In both cases, the generated fares income significantly exceeds the cost of operation of the station. In either scenario, therefore, the station is commercially viable.

Car Park

8.3.4 There are a number of options for the operation of the car park: this could be undertaken by Network Rail, by the train operating company or by Kent County Council. However, as the proposal is for the station to be unstaffed, the monitoring and maintenance of the car park would be contracted out. Therefore these costs would be the same whichever party undertook ownership of the car park.

8.3.5 Given the size and nature of the station it is unlikely that Network Rail would wish to run the car park.

8.3.6 The results of the economic appraisal would be similar whether the car park was run by Southeastern or Kent, since the revenue and costs would have the same respective values in either scenario. However, if parking was provided free of charge, there would need to be an income stream to cover costs: under Southeastern control, this could come from rail fares income but under KCC control the Council would need to identify a funding source.

8.3.7   Tables 8.3 and 8.4 set out the financial viability of the car park as a separate entity to the station itself, on the basis that it would be operated by a different organisation to the station, i.e. Kent County Council rather than Southeastern. Table 8.3 shows performance on the basis of a parking charge of £3.50 per day and Table 8.4 assumes no charge for parking. In the latter case, the cost of enforcement is saved as there is no need to police parking compliance. All figures are net present values for a 30 year period from car park and station opening.

	£'000
Parking Revenue	**4,527**
Costs	
Maintenance	228
Enforcement	1,410
Utilities	41
Total Costs	**1,680**
Profit/Loss	**2,847**

Table 8.3: Car Park Viability (Parking Charge of £3.50)

	£'000
Parking Revenue	**0**
Costs	
Maintenance	228
Utilities	41
Total Costs	**270**
Profit/Loss	**-270**

Table 8.4: Car Park Viability (Parking Free of Charge)

8.3.8   With a daily charge of £3.50, the car park is commercially viable with income of £4.5m over 30 years, compared to operating costs of £1.7m, giving a surplus of £2.8m. This is equivalent to a profit of £70k in the first full year of operation.

8.3.9   If parking is free, there is no income stream and consequently a loss of £270k over 30 years, equivalent to £13k in the first full year of operation. This is a relatively modest figure which could be covered by increased rail fares income if the car park is managed by the TOC.

8.3.10 On the basis of these forecasts, the parking charge option would require a car park with 137 spaces initially, rising to 248 after 30 years. The planned car park capacity of 320 would be reached in 2060.

8.3.11 If parking is free, 207 spaces are needed initially and the 320 car park capacity would be reached in 2040.

8.3.12 There is a theoretical loss of parking revenue at Ramsgate station from users switching to Thanet Parkway. In practice, however, parking at Ramsgate is severely constrained with only 44 spaces at the station.

9 Conclusions

9.1.1 The economic appraisal of a new Thanet Parkway station shows that it has a benefit cost ratio of 2.93 if car parking is charged for at £3.50 per day.

9.1.2 If parking is provided free of charge the benefit cost ratio is 2.97.

9.1.3 Both of these results represent high value for money and that building the station has a net economic benefit to society as a whole.

9.1.4 The commercial analysis shows that the station is viable with net generated fares income well in excess of the operating and maintenance costs.

9.1.5 The car park is also commercially viable if parking is charged at a rate of £3.50 per day. If parking is free, the car park requires a modest annual funding support of £13k.

9.1.6 The Ramsgate enhanced option will be cheaper to develop, but there is no clearly identifiable land on which a car park could be developed that will be future proof, allowing for growth within East Kent. There will be potential for added pressures on on-street parking in a residential area and air quality and safety concerns due to increased traffic levels.

Appendix A   Full Demand Modelling Results

Summary of Passenger Numbers - With Parking Charge

Thanet Parkway monthly parking charge (£):	70.00
Future Year :	2021

Thanet Parkway

Outbound Passenger Boarding Numbers		Weekday			Weekend	Weekday Numbers by Fare Period/Type						Weekend 24hr mean		Daily Revenue (£) - using 2013 fares						Weekend 24hr mean	
					24hr mean	pk. season (day eq)		full fare rtn.		reduced rtn.				pk. season (day eq)		full fare rtn.		reduced rtn.			
		before 0930	after 0930	24hr total	24hr total	HS1	Non-HS1	HS1	Non-HS1	HS1	Non-HS1	HS1	Non-HS1	HS1	Non-HS1	HS1	Non-HS1	HS1	Non-HS1	HS1	Non-HS1
Total from Thanet Parkway		233	133	367	123																
	to London	83	65	148	60	38.0	5.4	11.0	1.5	65.9	25.8	46.6	13.7	1021.10	122.48	801.21	97.07	2701.53	922.70	1909.35	489.59
	to other	151	68	219	63		103.2		29.8		86.2		63.2		518.48		286.52		622.63		456.67
of which abstracted		151	78	229	73																
	to London	56	42	99	39	26.0	3.7	7.5	1.1	43.3	17.1	30.2	8.9	698.80	83.82	548.32	66.43	1773.43	612.13	1236.88	317.16
	to other	95	36	131	34		64.7		18.7		47.5		33.6		324.97		179.58		343.02		242.50
of which new		82	55	137	51																
	to London	26	23	49	21	12.0	1.7	3.5	0.5	22.6	8.7	16.4	4.8	322.30	38.66	252.89	30.64	928.09	310.57	672.47	172.43
	to other	56	32	88	30		38.5		11.1		38.7		29.6		193.51		106.94		279.60		214.17
Estimated parking demand at TP station		128	43	171	40																
Total boarding at other stations (with TP operational) :																					
	Ramsgate	704	608	1312	563																
	Minster	42	44	86	40																
	Sandwich	228	197	425	183																
Ramsgate reduction in passengers due to TP :-																					
Switched to using TP :-		105	55	160	51																
	to London	39	29	68	27	18.0	2.5	5.2	0.7	30.1	11.9	21.0	6.2	482.79	57.91	378.82	45.90	1233.86	425.12	862.53	221.17
	to other	66	26	92	24		44.9		13.0		33.8		24.1		225.74		124.75		244.36		174.08
...wise stopped using Ramsgate (due to increase in GJT (due to extra stop), but not switched to TP) :-																					
Total		28	23	51	21																
	previously London	4	4	8	4	1.6	0.2	0.5	0.1	3.7	1.4	2.8	0.8	44.08	5.29	34.59	4.19	153.00	49.16	116.11	29.77
	previously other	24	19	43	18		16.6		4.8		21.8		17.5		83.61		46.21		157.68		126.68
Minster reduction in passengers due to TP :-																					
Switched to using TP :-		8	5	13	5																
	to London	3	2	4	2	1.2	0.2	0.3	0.0	1.9	0.8	1.3	0.4	31.34	3.76	24.59	2.98	78.77	27.26	54.76	14.04
	to other	6	3	9	3		4.0		1.2		3.8		2.9		20.29		11.21		27.50		20.77
Sandwich reduction in passengers due to TP :-																					
Switched to using TP :-		38	18	56	17																
	to London	15	11	26	10	6.9	1.0	2.0	0.3	11.2	4.5	7.8	2.3	184.67	22.15	144.90	17.55	460.80	159.75	319.59	81.95
	to other	23	7	30	7		15.7		4.5		9.8		6.6		78.94		43.62		71.17		47.65

Summary of Passenger Numbers - No Parking Charge

Thanet Parkway monthly parking charge (£):	0.00
Future Year :	2021

Outbound Passenger Boarding Numbers		Weekday before 0930	Weekday after 0930	Weekday 24hr total	Weekend 24hr total	pk. season (day eq) HS1	Non-HS1	full fare rtn. HS1	Non-HS1	reduced rtn. HS1	Non-HS1	Weekend 24hr mean HS1	Non-HS1	pk. season (day eq) HS1	Non-HS1	full fare rtn. HS1	Non-HS1	reduced rtn. HS1	Non-HS1	Weekend 24hr mean HS1	Non-HS1
Total from Thanet Parkway		273	152	426	141																
	to London	98	77	175	71	45.3	6.4	13.1	1.8	77.8	30.5	54.8	16.1	1216.76	145.95	954.73	115.67	3189.74	1091.95	2247.96	576.41
	to other	175	76	251	70		119.7		34.5		96.5		70.1		601.68		332.50		697.64		506.90
of which abstracted		185	94	279	87																
	to London	70	52	122	48	32.2	4.5	9.3	1.3	53.4	21.1	37.2	10.9	865.03	103.76	678.74	82.23	2188.21	755.92	1524.55	390.92
	to other	115	43	157	39		78.5		22.6		56.1		39.4		394.46		217.99		405.68		284.45
of which new		89	58	147	54																
	to London	28	25	53	23	13.1	1.8	3.8	0.5	24.4	9.4	17.6	5.2	351.73	42.19	275.99	33.44	1001.53	336.03	723.40	185.49
	to other	60	33	94	31		41.2		11.9		40.4		30.8		207.21		114.51		291.96		222.44
Estimated parking demand at TP station		155	52	207	48																
Total boarding at other stations (with TP operational) :																					
	Ramsgate	675	594	1270	550																
	Minster	42	44	86	40																
	Sandwich	223	195	417	180																
Ramsgate reduction in passengers due to TP :-																					
Switched to using TP :-		133	69	202	64																
	to London	50	38	88	35	23.3	3.3	6.7	0.9	38.7	15.3	27.0	7.9	624.77	74.94	490.23	59.39	1588.15	547.94	1108.25	284.17
	to other	83	31	114	29		56.7		16.4		41.2		29.0		284.87		157.43		297.67		209.78
...wise stopped using Ramsgate (due to increase in GJT (due to extra stop), but not switched to TP) :-																					
Total		27	22	49	21																
	previously London	3	4	7	4	1.5	0.2	0.4	0.1	3.6	1.3	2.7	0.8	41.30	4.95	32.40	3.93	146.04	46.75	111.28	28.53
	previously other	24	19	42	17		16.1		4.6		21.5		17.3		80.86		44.69		155.20		125.02
Minster reduction in passengers due to TP :-																					
Switched to using TP :-		8	5	13	5																
	to London	3	2	4	2	1.2	0.2	0.3	0.0	1.9	0.8	1.3	0.4	31.34	3.76	24.59	2.98	78.77	27.26	54.76	14.04
	to other	6	3	9	3		4.0		1.2		3.8		2.9		20.29		11.21		27.50		20.77
Sandwich reduction in passengers due to TP :-																					
Switched to using TP :-		43	20	63	19																
	to London	17	12	29	11	7.8	1.1	2.2	0.3	12.7	5.0	8.8	2.6	208.91	25.06	163.92	19.86	521.29	180.72	361.54	92.71
	to other	26	8	34	7		17.8		5.1		11.1		7.5		89.30		49.35		80.51		53.91

Summary of Passenger Numbers - With Parking Charge

Thanet Parkway monthly parking charge (£):	70.00
Future Year :	2031

Thanet Parkway

Outbound Passenger Boarding Numbers		before 0930 (Weekday)	after 0930 (Weekday)	24hr total (Weekday)	Weekend 24hr total	pk. season (day eq) HS1	pk. season (day eq) Non-HS1	full fare rtn. HS1	full fare rtn. Non-HS1	reduced rtn. HS1	reduced rtn. Non-HS1	Weekend 24hr mean HS1	Weekend 24hr mean Non-HS1	pk. season (day eq) HS1	pk. season (day eq) Non-HS1	full fare rtn. HS1	full fare rtn. Non-HS1	reduced rtn. HS1	reduced rtn. Non-HS1	Weekend 24hr mean HS1	Weekend 24hr mean Non-HS1
						Weekday Numbers by Fare Period/Type								Daily Revenue (£) - using 2013 fares							
Total from Thanet Parkway		252	144	396	133																
	to London	89	70	159	65	41.0	5.8	11.8	1.7	71.1	27.8	50.2	14.8	1100.80	132.04	863.75	104.65	2913.50	995.00	2059.42	528.07
	to other	163	74	237	68		111.3		32.1		93.1		68.3		559.54		309.21		672.89		493.72
of which abstracted		163	84	247	78																
	to London	61	45	106	42	28.0	3.9	8.1	1.1	46.6	18.4	32.5	9.5	752.56	90.27	590.50	71.54	1910.11	659.28	1332.26	341.61
	to other	102	39	141	36		69.7		20.1		51.2		36.2		350.21		193.53		370.04		261.69
of which new		89	59	148	55																
	to London	28	25	53	23	13.0	1.8	3.7	0.5	24.5	9.4	17.7	5.2	348.24	41.77	273.25	33.11	1003.40	335.72	727.16	186.45
	to other	61	35	96	32		41.6		12.0		41.9		32.1		209.34		115.68		302.84		232.03
Estimated parking demand at TP station		138	46	184	43																
Total boarding at other stations (with TP operational) :																					
	Ramsgate	764	660	1424	611																
	Minster	46	47	93	44																
	Sandwich	242	209	451	194																
Ramsgate reduction in passengers due to TP :-																					
Switched to using TP :-		113	60	173	56																
	to London	42	32	74	29	19.5	2.7	5.6	0.8	32.6	12.9	22.8	6.7	522.53	62.68	410.00	49.67	1335.51	460.13	933.60	239.39
	to other	71	28	99	26		48.6		14.0		36.6		26.1		244.40		135.06		264.66		188.57
...wise stopped using Ramsgate (due to increase in GJT (due to extra stop), but not switched to TP) :-																					
Total		30	25	55	23																
	previously London	4	4	8	4	1.8	0.3	0.5	0.1	4.1	1.5	3.1	0.9	47.85	5.74	37.54	4.55	166.05	53.35	126.01	32.31
	previously other	26	21	47	19		18.1		5.2		23.7		19.0		90.75		50.15		171.13		137.49
Minster reduction in passengers due to TP :-																					
Switched to using TP :-		9	5	15	5																
	to London	3	2	5	2	1.3	0.2	0.4	0.1	2.1	0.8	1.4	0.4	34.02	4.08	26.69	3.23	85.49	29.58	59.44	15.24
	to other	6	3	10	3		4.4		1.3		4.1		3.1		22.02		12.17		29.84		22.54
Sandwich reduction in passengers due to TP :-																					
Switched to using TP :-		40	19	59	18																
	to London	16	12	27	11	7.3	1.0	2.1	0.3	11.9	4.7	8.3	2.4	196.01	23.51	153.80	18.63	489.11	169.56	339.22	86.98
	to other	24	8	32	7		16.7		4.8		10.5		7.0		83.79		46.30		75.54		50.58

Summary of Passenger Numbers - No Parking Charge

Thanet Parkway monthly parking charge (£):	0.00
Future Year :	2031

Outbound Passenger Boarding Numbers		Weekday			Weekend	Weekday Numbers by Fare Period/Type						Weekend		Thanet Parkway Daily Revenue (£) - using 2013 fares						Weekend	
						pk. season (day eq)		full fare rtn.		reduced rtn.		24hr mean		pk. season (day eq)		full fare rtn.		reduced rtn.		24hr mean	
		before 0930	after 0930	24hr total	24hr total	HS1	Non-HS1	HS1	Non-HS1	HS1	Non-HS1	HS1	Non-HS1	HS1	Non-HS1	HS1	Non-HS1	HS1	Non-HS1	HS1	Non-HS1
Total from Thanet Parkway		295	165	460	152																
	to London	106	83	189	77	48.9	6.9	14.1	2.0	83.9	32.9	59.2	17.4	1312.57	157.44	1029.91	124.78	3441.92	1178.19	2425.90	622.04
	to other	189	82	271	76		129.2		37.3		104.3		75.8		649.59		358.98		754.07		548.08
of which abstracted		199	102	301	94																
	to London	75	56	131	52	34.7	4.9	10.0	1.4	57.5	22.8	40.1	11.8	932.38	111.84	731.60	88.64	2358.83	814.84	1643.47	421.41
	to other	124	46	170	42		84.6		24.4		60.6		42.5		425.38		235.07		437.82		307.07
of which new		96	63	159	58																
	to London	31	27	57	25	14.2	2.0	4.1	0.6	26.4	10.1	19.1	5.6	380.18	45.60	298.31	36.14	1083.09	363.35	782.43	200.63
	to other	65	36	101	33		44.6		12.9		43.8		33.3		224.21		123.90		316.25		241.01
Estimated parking demand at TP station		167	56	223	52																
Total boarding at other stations (with TP operational) :																					
	Ramsgate	733	645	1378	597																
	Minster	46	47	93	44																
	Sandwich	236	207	443	191																
Ramsgate reduction in passengers due to TP :-																					
Switched to using TP :-		144	75	219	69																
	to London	55	41	96	38	25.2	3.6	7.3	1.0	42.0	16.6	29.3	8.6	676.62	81.16	530.91	64.32	1720.02	593.44	1200.28	307.77
	to other	90	34	124	31		61.4		17.7		44.6		31.5		308.57		170.52		322.52		227.31
...wise stopped using Ramsgate (due to increase in GJT (due to extra stop), but not switched to TP) :-																					
Total		29	24	54	23																
	previously London	4	4	8	4	1.7	0.2	0.5	0.1	3.9	1.4	2.9	0.9	44.82	5.38	35.17	4.26	158.50	50.74	120.77	30.97
	previously other	26	20	46	19		17.5		5.0		23.3		18.8		87.76		48.50		168.44		135.68
Minster reduction in passengers due to TP :-																					
Switched to using TP :-		9	5	15	5																
	to London	3	2	5	2	1.3	0.2	0.4	0.1	2.1	0.8	1.4	0.4	34.02	4.08	26.69	3.23	85.49	29.58	59.44	15.24
	to other	6	3	10	3		4.4		1.3		4.1		3.1		22.02		12.17		29.84		22.54
Sandwich reduction in passengers due to TP :-																					
Switched to using TP :-		45	22	67	20																
	to London	18	13	31	12	8.3	1.2	2.4	0.3	13.5	5.4	9.4	2.7	221.74	26.60	173.99	21.08	553.31	191.82	383.75	98.40
	to other	28	9	36	8		18.9		5.4		11.8		7.9		94.78		52.38		85.46		57.22