Thanet Parkway Station

Proposed Station

Technical note

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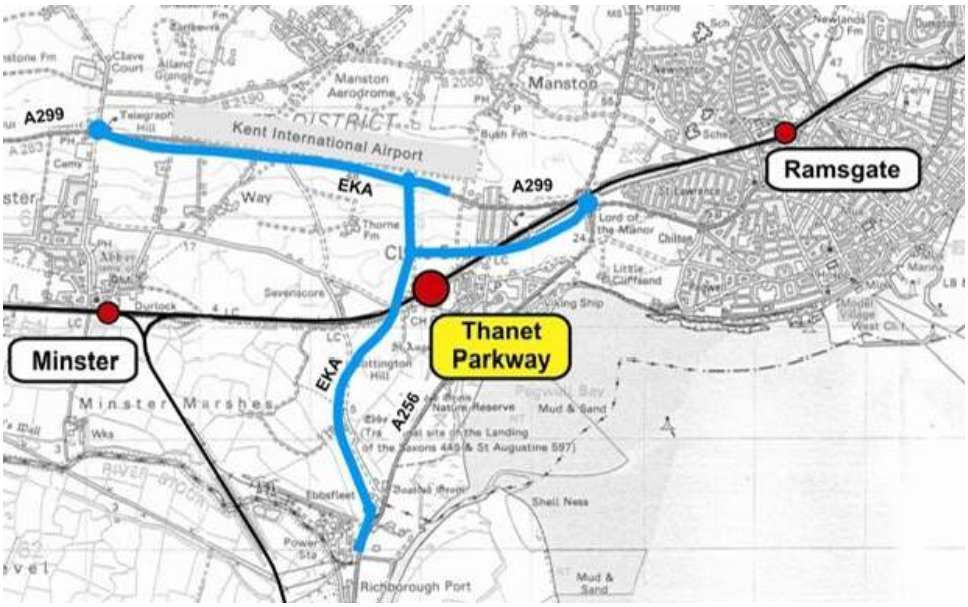
1 Introduction

Background

1.1 The proposed location for Thanet Parkway station is in the vicinity of Cliffsend village, between Minster and Ramsgate, and with direct access to the new East Kent Access (EKA) road.

1.2 The new EKA road, currently under construction and scheduled for completion in 2012, will improve the link into Thanet by replacing existing substandard single carriageway sections on the A256 and the A299. It will provide the opportunity for direct access to the station without introducing increased traffic volumes to existing local roads. In addition, the EKA road will provide a good connection between the station and Manston (Kent International) Airport.

FIGURE 1.1 PROPOSED THANET PARKWAY AND EAST KENT ACCESS ROAD



1.3 Within the corridor under consideration for the station a number of potential locations exist. A preferred site has been identified based on station design requirements, rail operation implications, access on and off the EKA road and consideration of potential property disturbance issues.

2 Preferred Station Site

Rail Corridor Issues

2.1 The station is proposed to be located within the corridor bounded by the auto half barrier (AHB) level crossings at Sevenscore and the A299 overbridge.

FIGURE 2.1 RAIL CORRIDOR OVERVIEW

2.2 Cliffsend AHB level crossing is located close to the middle of the corridor. Any new station must be carefully located in conjunction with the level crossing strike in treadles to avoid delays to road traffic as this increases the risk of improper use. Sevenscore and Cliffsend level crossings may see a reduction in road traffic once the EKA road has been constructed, but this is unlikely to change their risk status to permit a downgrade from AHB.

2.3 Conversely, any works which affect the level crossings could require their legal orders to be updated. This imports the risk that the crossings in their current form as AHB are no longer fit for purpose and require to be upgraded to Manually Controlled Full Barrier type. This will add cost and complexity to the project and is therefore desirable to avoid.

2.4 The gradient of the track at this location transitions from 1:330 at the west (Sevenscore) to 1:113 in the centre and 1:100 in the east (A299 overbridge). Railway Group Standards previously required that gradients should be no steeper than 1:500 at a new station location, however this requirement has recently been relaxed in the December 2010 issue of GI/GN 7616, providing due consideration is given to the safe operation of trains.

Proposed Station

2.5 Trains will not terminate, turnback, split or combine at Thanet Parkway which makes demonstration of safe operation more straightforward. However, an area which will require further consideration is the proximity of level crossings and hence the risk due to trains stopping regularly close by on such a gradient.

2.6 It is therefore preferable to locate the station towards the western end of the corridor where the gradient is shallower.

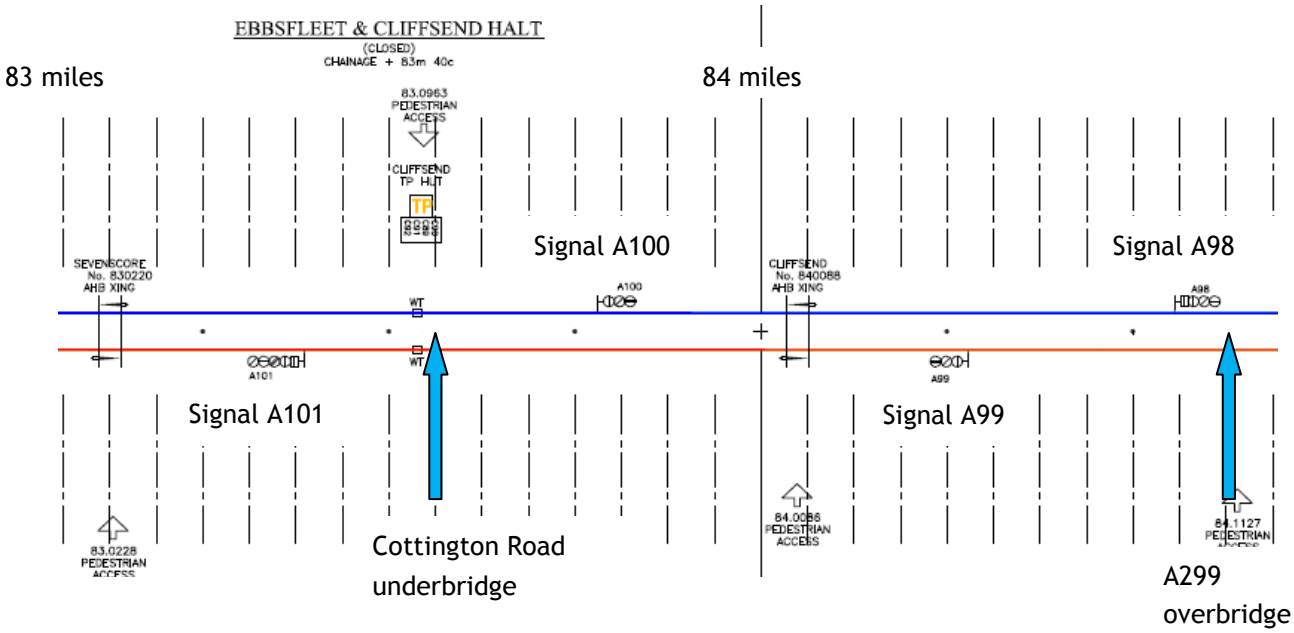
2.7 The track is on a slight curve at the west end of the proposed corridor but the radius of 1520 yards is within permissible standards for constructing a station. In the centre and east of the corridor, track is tangent (straight).

2.8 Assuming the new station can be accommodated within existing track gradients, the next most significant constraint is the signalling system. Construction risk is considerably reduced if there is confidence that the station can be sited in a manner which avoids the need to move or modify the existing signalling system.

2.9 The corridor under consideration is track circuit block with signals spaced approximately every mile. This relatively close signal spacing provides a good opportunity to accommodate an additional station stop and then clear the track circuit section without disproportionately holding up following train services. This gives confidence that the new station can be provided without having a detrimental impact on performance.

2.10 The diagram below shows the locations of the signals with respect to level crossings and key bridges in the corridor.

FIGURE 2.2 CORRIDOR SIGNAL SITES



2.11 For the Up line (services to Ashford and the red lower track in the above diagram) the optimum location for a platform is between signals A99 and A101. Locating the platform rear of signal A101 will mean significant changes to the signalling system controlling Sevenscore AHB.

2.12 If the Up platform is located in advance (to the east) of signal A99, all trains departing Ramsgate will be under caution (amber signal) whilst a train is stopped in Thanet Parkway. This has the potential to cause performance issues in the morning peak but in the off peak, the headway between services means this is unlikely to be an issue.

2.13 With respect to the Down line (to Ramsgate and the blue upper track in the above diagram), the platform should ideally be located between Sevenscore AHB and signal A100. This avoids significant changes to the signalling controls for Cliffsend AHB, but means that services joining the Down line from Minster south junction will approach on caution (amber) rather than green if a train is stopped at the new station.

2.14 Locating the Down platform in advance of A100 is sub optimal from a rail operations perspective because trains exit Minster south junction under caution, however, given the relatively low frequency of trains using this junction it is unlikely to be a problem in reality. This is felt to be a better compromise than altering Cliffsend AHB. (If this level crossing was closed as a result of the EKA road, then the station could be located closer to the village as signal A100 would no longer be protecting a level crossing.)

Proposed Station Location

2.15 The optimum location for the station is therefore between signals A100 and A101. This will still require the following alterations to the signalling system, which carries risk of scope creep and requiring the level crossing order to be amended:

- Assuming both level crossings remain operational once the station is constructed, a facility to allow the driver to manually trigger the next crossing will be required to be placed on each platform. This usually takes the form of a driver operated plunger adjacent to the stop board. Once triggered by the driver, the level crossing barrier lower sequence will commence and the protecting signal gives a proceed aspect after a predetermined time sufficient to allow the crossing barriers to have lowered. This arrangement will mean the typical station dwell time is likely to be at least a minute and may add to the overall journey time; and
- An override function to allow the signaller to set the route for a non stop train would be required to be installed for signals A100 and A101. The default position would be that these signals show red in order to protect the crossing and the signal is only cleared when the driver operates the platform plunger. In the case of a non stop train, the relevant signal can be manually over-ridden by the signaller and the level crossing operates using the strike in treadles as currently.

2.16 Alternatives to Traincrew operation of the level crossing barrier lower sequence should be considered during GRIP stage 3 design. The sequence could be initiated by the signaller provided there is a mechanism of notifying him / her from the station that the train is ready to depart. Without this “real time” information, the risk of crossing misuse through the barriers being lowered for extended periods of time is likely to be unacceptably high. If one or both crossings can be permanently

closed as a result of the additional connectivity provided by the EKA, then this issue would be considerably simplified.

2.17 If the impact on the level crossing cannot be designed out as described above, the level crossing could be upgraded to full barrier manual control, at a cost of circa £1 – £1.5m. Alternatively a bridge could be provided, for which the cost would probably be similar. The engineering risk of providing a new station and the impact on rail operations will be minimised if Cliffsend AHB is closed once the EKA road is constructed.

2.18 Cottington Road underbridge is located in the middle of the preferred site, between signals A100 and A101,with the EKA overbridge being constructed to the west of this. Signal A101 is located just over 400m to the east of Sevenscore AHB leaving insufficient room for a platform between the signal and the new Cottington Road overbridge on the EKA. The station must therefore be located immediately to the east of the existing Cottington Road underbridge. With 12 car platforms of length circa 250m there is little tolerance on fitting the platforms between the underbridge and signal A100 whilst retaining appropriate sighting distance of around 25m. The exact fit will require to be tested during the design phase.

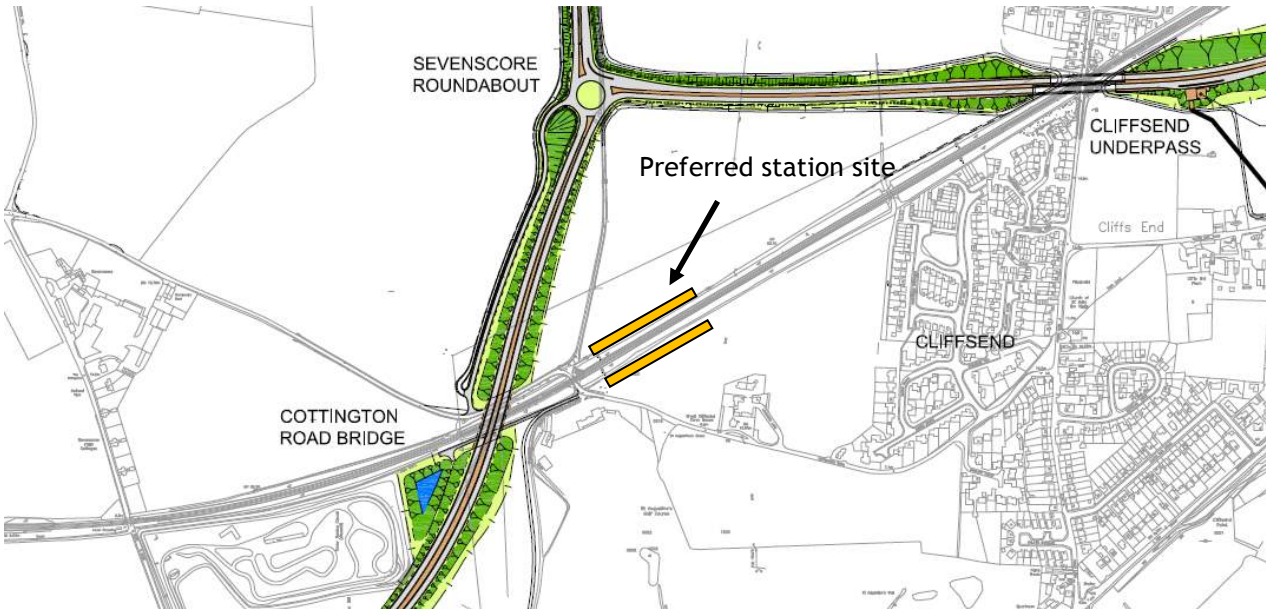
2.19 With respect to civil engineering factors, this site is not ideal as the railway is on an embankment at this location and drainage is poor because of a high water table. Platforms will be around 4m above the surrounding ground level and piled foundations will probably be required to support structures on the embankment slope. Recent Network Rail reports indicate parts of the embankment in this area are classified as “marginal” and therefore have some risk of movement. Site investigations will be required during the next phase of design to ascertain the extent of this risk and any remedial actions.

2.20 The existing Cottington Road underbridge provides an opportunity to provide DDA access between platforms without a footbridge or lifts and this will be explored during the design phase.

2.21 There is an existing drainage culvert under the railway close to this area and the East Kent Access road will also provide new drainage facilities which could be connected into.

2.22 This site does have good access both for construction and subsequent operation, is relatively level and has few direct neighbours who will be affected by construction and operation. This site is also outwith the Thanet source protection zones.

FIGURE 2.3 PROPOSED PREFERRED SITE



2.23 If the suggested site is not practicable for other reasons, and the site between the EKA road and Sevenscore AHB is desired it would be possible to consider moving signal A101 closer to the level crossing and reduce the overlap which at 444 yards is around twice that required by standards. Alternatively the station could be accommodated between Cliffsend AHB and Lord of the Manor roundabout by moving signal A99 closer to the level crossing and reducing its overlap from the existing 393 yards. The signalling works described in paragraph 2.15 would still be required in addition to those associated with moving the signals and this is an substantially more complex solution.

3 Rail operations

Background

3.1 Thanet Parkway will be located on the Ashford-Canterbury-Ramsgate rail line between Minster East Junction and Ramsgate. It could potentially be served by all trains on the routes from London to Ramsgate via Canterbury West and via Dover.

Timetable Implications

3.2 The current National Rail timetable (December 2010) shows an off peak frequency of 2 tph between Canterbury West and Ramsgate through the site of the proposed station. Both these services originate in London, one at Charing Cross and the other at St Pancras International, and owing to the length and complexity of their journeys the most likely way to accommodate a stop at Thanet Parkway would be to leave the timings of the trains as they are today up to the new station but then allow extra time for braking, a dwell at the platform, and subsequent acceleration away – the trains would thus arrive at Ramsgate 2-3 minutes later than now.

3.3 In the London commuter peak hours, an additional train per hour operates on the line via Canterbury West and this could be accommodated at the station in the same manner.

3.4 Similarly the 1 tph that passes the site en route from Dover to Ramsgate has also originated in London and would most likely be retimed in the manner described above, and also arrive at Ramsgate 2-3 minutes later than now.

3.5 There is sufficient turnaround time and platform capacity to permit inbound services to arrive a few minutes later at Ramsgate and for outbound services to depart a few minutes earlier so as to accommodate the time for the additional stop at Thanet Parkway whilst maintaining timings for the remainder of their journeys.

3.6 The timetable planning headway between Minster and Ramsgate is 4 minutes, though no off peak trains in the public timetable operate at this headway; there are however a few instances in the peaks. If all trains are planned to stop at the new station, the current off peak timetable could operate as now with all trains retimed slightly between the station and Ramsgate and vice versa. In the peaks when the 4-minute planning headway is occasionally applied it may be necessary for a few trains not to call at the station, or be retimed slightly to meet the necessary planning headway and ensure driver's receive appropriate signal indications.

3.7 The current service from London St Pancras to Ramsgate via Ashford continues beyond Ramsgate to terminate at Margate. It is followed from Ramsgate to Margate at the minimum 4-minute planning headway by a Ramsgate to Charing Cross via Faversham service. Thus if the train from London St Pancras was to call additionally at Thanet Parkway, and was thereby retimed 3 minutes later into Ramsgate, it would not be able to continue to Margate without some consequential retiming. The options would include:

- The train from London St Pancras remaining at Ramsgate for 5 minutes before proceeding to Margate, following the Charing Cross train at the minimum headway.
- The Charing Cross train being retimed to depart Ramsgate 5 minutes earlier (with a longer dwell at Margate or Faversham), in order to allow the train from St Pancras to follow it to Margate at the minimum 4-minute headway and without any additional dwell at Ramsgate.
- The Charing Cross train becoming the 'fast' portion in each hour, no longer stopping at Dumpton Park, Westgate-on-Sea and Chestfield & Swalecliffe, and thus able to depart Ramsgate 6 minutes later than now, which is sufficient to allow the retimed St Pancras train to continue to run ahead of it to Margate. The alternate departure from Ramsgate to Charing Cross via Faversham in each hour would need to be retimed as the 'slow' portion and call at all stations between Ramsgate and Faversham.
- The train from St Pancras is able to arrive at Ramsgate as now, despite making an additional stop at the new station, due to its journey time from Ashford being reduced as a result of linespeed enhancements (see below).

3.8 The first two of these options are less desirable because of the significant journey time penalty incurred by the lengthy dwells that would result. The third option appears practical, though it may also be appropriate to make the same adjustment to the stopping patterns in the opposite direction in order to maintain approximately similar stock turnaround times at Ramsgate. The fourth option would be the most appropriate, as it involves no consequential retiming to other services as well as providing journey time benefits.

Linespeed Enhancements

3.9 If linespeed improvements were to be implemented between Ashford and Ramsgate via Canterbury West it is possible that the end to end journey time on this route could be maintained even with the extra stop – this would help to remove any journey time disbenefit for existing users travelling on the line through the new station and also enable trains on this route to continue to arrive at Ramsgate at their current time which will help to overcome possible pathing and consequential retiming issues as mentioned above.

TOC Operating Cost Issues

3.10 Southeastern will not incur any significant additional train operating cost as rolling stock, vehicle miles and traincrew requirements will remain virtually the same as currently. It should however be noted that, if trains were to be significantly retimed as described in some of the options mentioned in paragraph 3.7, it is possible that additional staffing changes might be required.

3.11 It is assumed at this stage that longer trains will not be required on this section of route as a result of the new station – this would potentially have a significant cost and timetabling impact as the 6 car sets join with Folkestone departures at Ashford before travelling on to London St Pancras as a 12 car train.

3.12 Southeastern will incur station operating costs as a result of the additional station. Even if it is unstaffed, utility, CCTV monitoring, ticket vending and maintenance

costs will all be incurred; an ongoing long term facility charge will also be payable to Network Rail to cover renewal of the platforms, footbridge and buildings.

3.13 If car parking is to be charged, there will be a cost of enforcing compliance. It is reasonable to assume revenue generated by the car parking will cover the cost of enforcement. If the station is staffed, there is an opportunity for station staff to manage car parking compliance.

3.14 The car park could be owned by someone other than Network Rail and this will avoid a long term charge of circa £150 per space per annum. Irrespective of the owner, the car park will incur lighting, CCTV monitoring and general maintenance costs (litter picking, white lining etc).

4 Feasibility Design

Introduction

4.1 A feasibility design for the preferred station site has been produced to Network Rail's GRIP stage 2 level of detail. Appendix A provides a copy of the plan.

Station Specification

4.2 The station has been designed to the following specification:

- 2 platforms for 12 car 20.2m rolling stock;
- Waiting shelters;
- Customer information displays and public address;
- Driver only operation viewing facilities;
- CCTV and passenger help points;
- Disabled access from car park to both platforms;
- Ticket vending machines;
- Footbridge with lifts;
- Access to the highway; and
- Pedestrian / cycle access to Cliffsend.

4.3 Whilst it is anticipated that the station will initially be unstaffed, passive provision has been made in the design to accommodate a station building in future. Given the forecast footfall and anticipated staffing level, a 12 x 6m standard modular building is felt to be most suitable. This provides a covered waiting area, booking office, staff accommodation and a public lavatory.

4.4 In addition to the station buildings and platforms, the requirements for a parkway station are:

- Long stay parking for cars, motorcycles and cycles;
- Setdown and pickup areas for buses, taxis and kiss & ride; and
- Dedicated parking for station and maintenance staff.

Station design considerations

4.5 The station platforms are located on tangent track where the gradient is around 1:113. As discussed in paragraphs 2.4 and 2.5 evidence will have to be provided in future stages of design to demonstrate the gradient does not present a safety risk to train operations.

4.6 Each platform is 3m wide and 252m long to accommodate standard prefabricated modules. To ensure a minimum clearance of 2.5m between the platform edge and any obstruction, the platform will be widened where waiting shelters are provided and the lifts and steps are located.

4.7 Lighting columns will host CCTV cameras and LLPA speakers and be located at the back of the platform. Two customer information displays and one help point are assumed on each platform.

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4.8 Passive provision has been made for a 12 x 6m modular station building on the forecourt and provision has been made for two automatic ticket vending machines.

4.9 The principal difficulty in the station design is accessing the platform level from the forecourt and car park level. We estimate there will be approximately a 4m height difference between both levels.

4.10 From a station users perspective the most practicable solution is to install an underpass and provide lift and stair access to both platforms. However, this brings the risk of needing to stabilise larger sections of the embankment and we feel this solution will be 20% to 50% more expensive than providing a footbridge. This option should still be considered in GRIP 3 as it may become commercially viable if embankment stabilisation works are required to accommodate the platforms or lifts and footbridge.

4.11 The existing Cottington Road underbridge provides an opportunity to provide DDA access between platforms without a footbridge or lifts. However, the bridge is not sufficiently wide to safely separate vehicle and pedestrian traffic and would require redecking and abutment works in order to be used as an access between the platforms. The existing bridge would be suitable if road vehicular access was prohibited. This solution would avoid the need for lifts but sizable DDA ramps would still be required to bring passengers up to platform level.

4.12 The underpass and Cottington Road options to access the Up (Ashford) platform from the car park should be further considered in GRIP stage 3 following site walkouts with Network Rail engineering staff. At this stage in the project lifecycle, both options are felt to present larger construction risks than the proposed standard footbridge accessed by steps and lifts. The footbridge solution has therefore been used to develop the cost estimate. Given the size of the embankment, DDA ramps will be so large as to be unpopular with users, visually intrusive and are unlikely to be less expensive than lifts.

4.13 In the design presented in Appendix A, the lift on the station forecourt side will have an intermediate stop to serve the Down (Ramsgate) platform and an upper stop serving the footbridge which will allow access to the Up (Ashford) platform. Piled foundations are assumed to support the lift shafts, footbridge and stairs on both sides of the railway.

4.14 Weather protection for passengers will be provided by waiting shelters on each platform. A single shelter will be provided on the station forecourt to protect the ticket vending machines and also serve passengers waiting to be collected by bus, taxi or cars.

4.15 Two customer information display screens are assumed per platform with two provided to serve the station forecourt and car park areas. Alterations to the signalling system will be required and the options discussed in paragraphs 2.15 and 2.16 should be developed through consultation with Network Rail and Southeastern operating staff.

Station access and car park design considerations

4.16 In order to provide some contingency in the design over and above the forecast demand requirements, the number of long stay car spaces has been taken as 300.

The ORR Code of Practice for Disabled Passengers requires (for car parks of more than 200 spaces) 4% of capacity + 4 reserved spaces for blue badge holders (= 16). These "must be close to the station entrance with direct pedestrian-only access to the entrance". This requirement is the starting point for the car park layout.

4.17 In order to encourage public transport use, buses and taxis should pick up and set down as close to the station entrance as possible, Cyclist parking should also be close to the entrance and highly visible to deter theft.

4.18 Kiss & ride requirements are different for set down and pick up. For set down, a layby close to the station entrance suffices as cars will only be stopping for as long as it takes for the passenger (and any luggage) to disembark. For pick up, the driver may arrive early or the train may be late so a short stay parking area is required. This area can also accommodate staff parking. Dedicated spaces for blue badge holders have been included to allow for the additional time and space required to load/offload a wheelchair.

4.19 To encourage use of the station, easy access to the highway network is required so a direct connection to the roundabout is shown. This also improves the 'visibility' of the station. We have chosen not to use Cottington Road and the revised highway arrangement introduced with the EKA road as the access to the station as combined with the length of new road required to connect into the station from Cottington Road underbridge, it is slightly longer than constructing a new direct access road as proposed. Additionally, if Cottington Road was used, access to the site would not be as visible and intuitive as with the proposed scheme, nor would it facilitate, as easily, the further development of the area within the triangle around the station site.

4.20 A 'central' pedestrian spine in front of (and orthogonal to) the station entrance has been shown with long stay car parking on one side and short stay, bus and taxi facilities on the other. Cycle parking is located in the pedestrian spine.

4.21 The turning requirements for a bus and the desire to get the bus close to the station entrance and be able to stop close and parallel to the kerb (for mobility impaired passengers) dictate the layout of the non-car park side and, indeed, which facilities should be on which side of the pedestrian spine.

4.22 Since taxis can set down or pick up from either side of the vehicle these are located on the offside of the access road opposite the bus stop. As the driver is on the right hand side of the vehicle, an offside arrangement for taxis is beneficial.

4.23 As it is not known, at this stage, what the bus and taxi services would be – or whether there will be a station building - shelters for waiting passengers are shown. Real time passenger information should be provided at the bus stop.

4.24 The car park has been shown with access/egress barriers as the charging regime is not known at this stage but these can be omitted if pay and display is used.

4.25 Kiss & ride passengers are more time sensitive when arriving to catch a train, drop-off laybys are located on either side of the access road adjacent to the pedestrian spine so as to be close to the station entrance.

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4.26 The short stay parking area for kiss & ride pick up is located in the island created by the bus and taxi turn-round as, for the above reason, it does not need to be quite so close to the station entrance and the space is available.

4.27 A pedestrian crossing is located on the desire line from this island to the station entrance and the required visibility passed a stopped bus has been taken into account. Whether this is a legal zebra crossing or an advisory one will depend on the status of the access road.

4.28 In order to improve accessibility to the station for local residents, pedestrian and cycle access is provided both from Cliffsend village and Cottington Road.

4.29 Areas not required for vehicles or pedestrians are shown as landscaping to improve the overall attractiveness and reduce cost.

5 Cost Estimates

Capital Cost

5.1 Table 5.1 summarises the capital cost estimate for Thanet Parkway station. A full breakdown of the estimate is presented in Appendix B.

TABLE 5.1 CAPITAL COST ESTIMATE (Q1 2010 COSTS)

Element	Cost (£m)
Platforms, furniture, passenger security and information systems	2.72
Lifts, stairs and footbridge	0.84
Signalling system modifications	0.63
Car park, road access and landscaping	1.45
Provision of utilities and drainage connections	0.20
Total construction costs	**£5.84**
Non construction costs (design, project management, preliminaries)	**£2.65**
Contingency	**£1.70**
TOTAL	**£10.2m**

5.2 Quantities have been estimated from the layout drawing presented in Appendix A. The unit rates used and uplifts for non construction costs are consistent with Network Rail's estimating practices.

5.3 The total estimate of £10.19m is felt to be robust and appropriate for the current level of development given the risks discussed in Chapter 4 involving construction on an embankment, modifications to the signalling system and the poor drainage in the area. There is opportunity for this to reduce in future stages of development.

Operating Cost

5.4 The annual operating cost of the station is estimated as £0.19m and a full breakdown is presented in Appendix B

5.5 We believe Southeastern will not incur additional cost by stopping existing services at Thanet Parkway as turnaround times at Ramsgate seem sufficient to accommodate the additional stop without performance impact and no additional rolling stock or Traincrew resource is required.

5.6 Therefore providing the new station is unstaffed, the sources of additional operating cost will be incurred through:

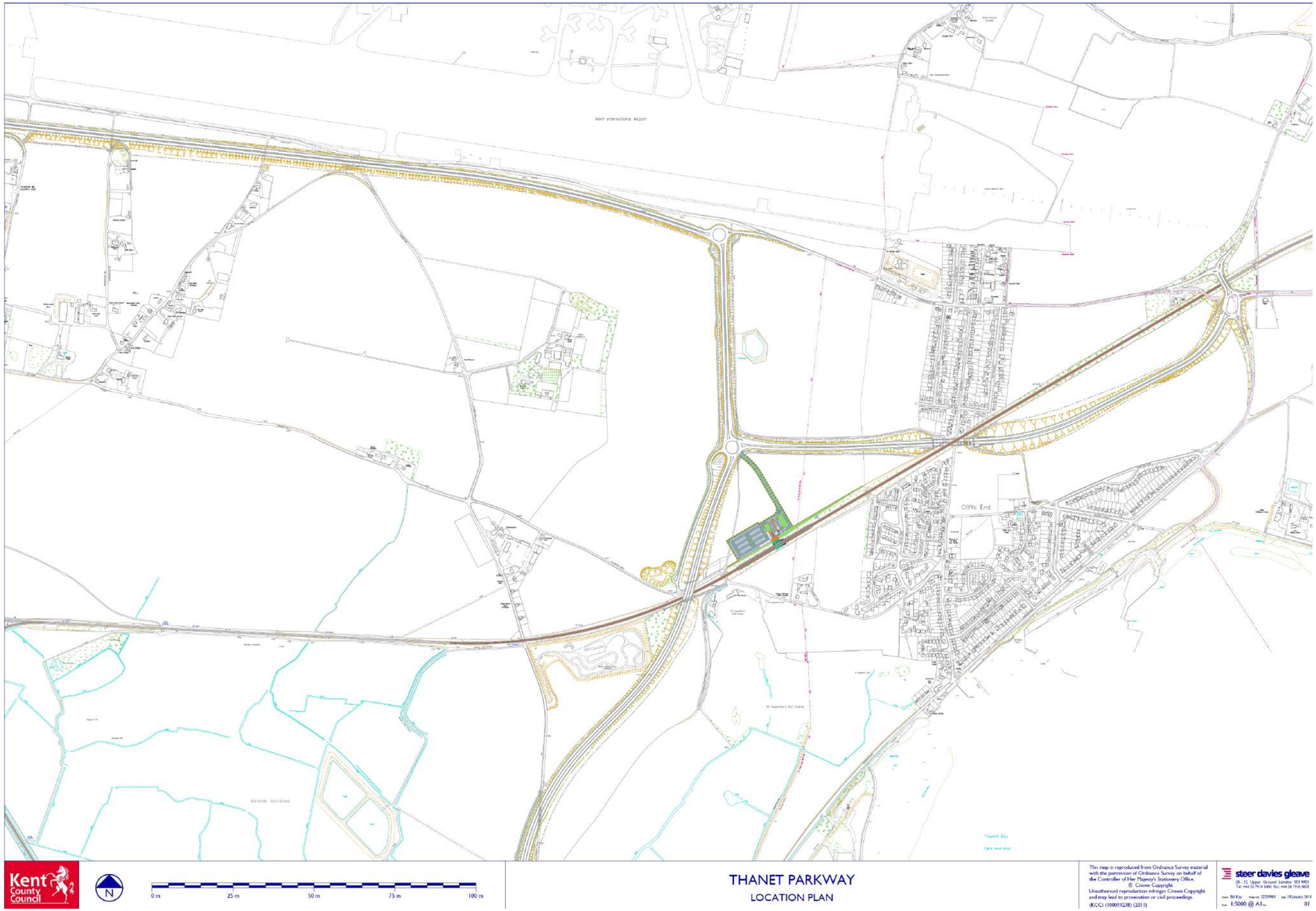
- Lease (or long term) charges to Network Rail to cover asset renewal;
- Maintenance and cleaning costs;
- Utility costs; and
- Car parking enforcement.

APPENDIX

A

STATION LAYOUT DESIGN

Proposed Station



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THANET PARKWAY
STATION DETAIL
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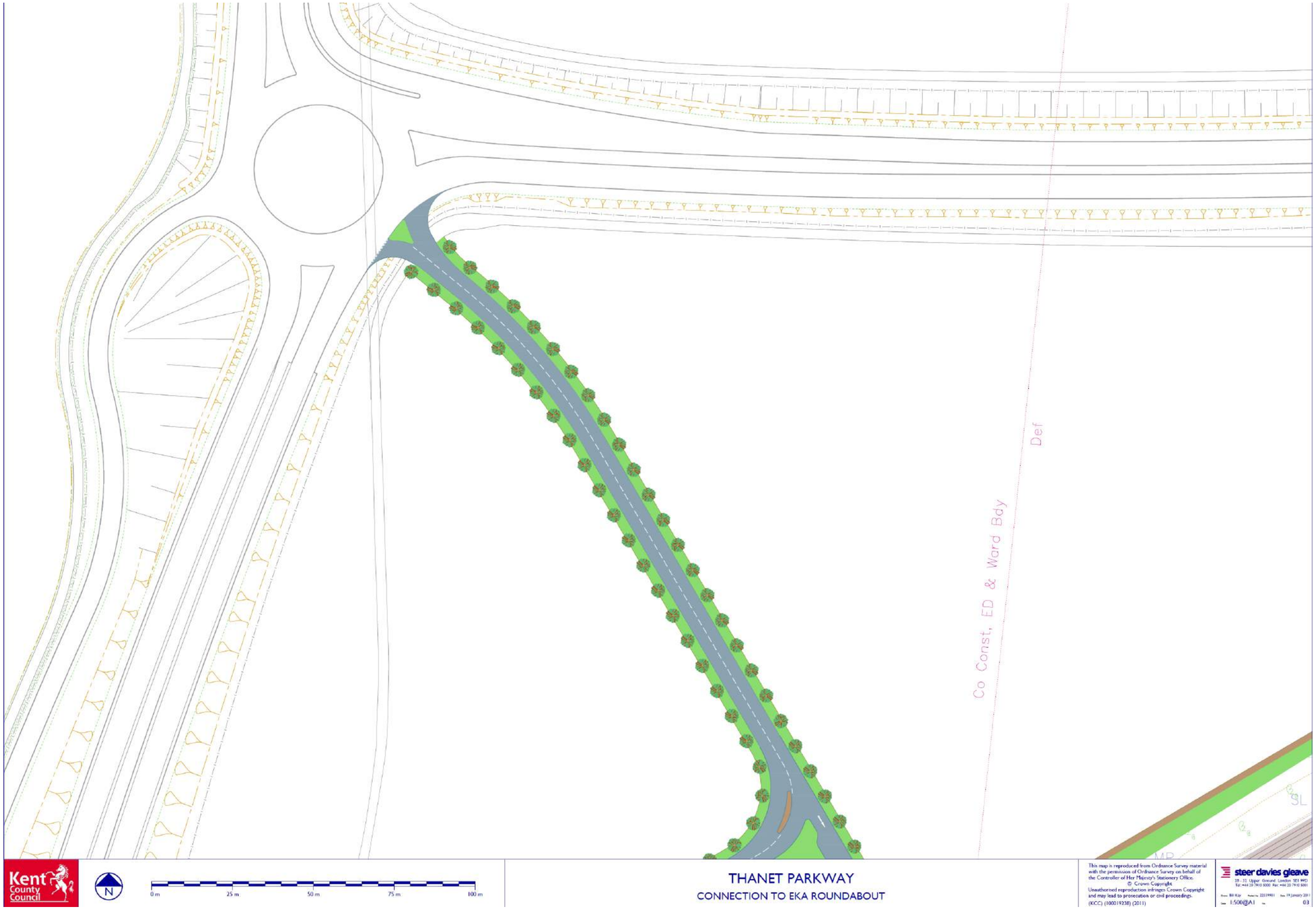
Proposed Station



APPENDIX

B

COST ESTIMATES

B1.1 CAPITAL COST ESTIMATE

THANET PARKWAY STATION - UNSTAFFED **Estimate V3_0 10th January 2011**

Station Construction Costs				Quantity	Unit	Rate	Total	Comments
Single story modular building - floor area	0	x	0	0	m2	7,500	0	12m x 6m (Assume unstaffed station initially)
Foundation				0	item	50,000	0	Slab or piled.
Platform construction (Modular)	252	x	3	1,632	m2	1,000	1,632,000	Platform = 252m x 3m + 60m2 for waiting shelters and misc. Rate includes ducts and drainage.
Piled foundations to platforms				168	No	2,500	420,000	Assume 3m pile centres
Platform end gate and steps				4	item	5,000	20,000	
8m platform lighting columns				56	No	2,000	112,800	Assume one column every 10m plus 6 for station forecourt
Platform signage				1,632	m2	10	16,320	
Platform fencing				605	m	100	60,480	Assume as platform length + 20%
Platform furniture				1,632	m2	20	32,640	
CCTV				22	camera	3,500	77,000	6 each platform, 6 on lifts & bridge and 4 in station forecourt area
LLPA				56	speaker	750	42,300	Includes provision for amplifier and controller
CIS display screen				6	item	7,500	45,000	2 each platform and 2 in station building / forecourt
Help points				2	item	8,000	16,000	1 each platform
DOO cameras and monitors				2	platform	35,000	70,000	1 system each platform - may not be required if all rolling stock fitted with CCTV
Telecoms connection to control centre(s)				1	item	5,000	5,000	
Platform shelters				5	item	25,000	125,000	Assume two 6m x 2m shelters per platform and 1 on forcourt / bus stance
Footbridge				1	item	350,000	350,000	
MIP Lift Down platform				1	No	250,000	250,000	Increased cost due to intermediate stop at platform level
MIP Lift Up platform				1	No	190,000	190,000	
Allowance for piled foundations				18	No	2,500	45,000	
DDA ramps (no lifts)				0	item	225,000	0	Down platform ramp will be very large and unsightly
Cycle parking				40	spaces	1,500	60,000	Incudes canopy, lighting and hoops
Automatic ticket gates				0	item	40,000	0	For staffed station assume 4 required (1 wide and 3 standard)
Ticket vending machine				2	item	23,000	46,000	Assume 2 for unstaffed station
Booking office fit out				0	item	25,000	0	Assume STAR operating system, furniture, IT equipment if staffed station
Site preparation				1	item	25,000	25,000	General preparation of site and passive provision for station building.
Drainage works				0	item	100,000	0	Adjacent drainage systems identified to connect into. Risk these require renewal
Embankment stabilisation				0	item	500,000	0	Most recent study identifies embankments along station site as stable or marginal. Remedial works may be require to support platform, lifts and footbridge
Signalling works				4	SEU	157,500	630,000	Driver plunger and signaller over-ride for A100 and A101
Permanent way works				0	item	500,000	0	Station located on tanget track - assume no p/way works required.
Utility provision and diversion				1	item	200,000	200,000	Provisional sums for Water, drainage and electricity connections.
External Works to Station								
Footpath (1.5m wide)				460	m	50	23,000	
Access road 7.3m wide (inc pavements)				290	m	1,200	348,000	Includes bus, taxi rank and kiss and ride areas
Car Park (including lighting, marking, drainage)				320	space	2,500	800,000	Includes disabled and 20 short stay spaces
Car park fencing	510		1	1,022	m	21	21,462	
Car park CCTV				20	camera	3,500	70,000	
Landscaping	1020	x	5	5,100	m2	20	102,000	
Total Base Cost - Thanet Parkway							**5,835,002**	

sprentice:
Out-turn SEU rate of £225k reduced to deduct non construction costs

Non Construction Costs				% of Base	Unit	Rate	Total	Comments
Contractor preliminaries				20.0%			1,167,000	
GRIP stages 1-4 development				4.0%			233,400	
GRIP stage 5 detailed design				6.0%			350,100	
Project Management & Sponsorship				10.0%			583,500	
Testing and commissioning				2.5%			145,875	
Possession management				2.5%			145,875	
TOC Compensation				0.0%			-	
Land	100	x	200	2.0	Ha	£ 13,580	27,160	Assume £5,500 per acre for argicultural land (Measured land take = 19.410m2)
Total Non Construction Cost							**2,652,911**	

Sub Total							**8,487,913**	
Contingency				20%			**1,697,583**	Remove if OB of 44% or greater being applied in appraisal
TOTAL							**£10,185,496**	

Cost Base is Q1 2010
Prices exclude VAT
No provision for contaminated waste disposal
No provision for TOC compensation
Rules of the route possessions assumed
NR asset protection costs included within Project Management, GRIP 1-4 development, GRIP 5 detailed design and testing and commissioning

Proposed Station

B1.2 OPERATING COST ESTIMATE

THANET PARKWAY STATION **Estimate V3_0 10th January 2011**

Station Opex Costs		Quantity	Unit	Rate	Total	Comments
Station - long term charge		1	station	35,000	35,000	Estimate based on comparable stations
Car park - long term charge		320	spaces	150	48,000	Avoided if car park retained by KCC
Station staff		0	staff	26,000	-	Assume station staffed 06.30 to 21.00 M-S 15 hrs per day = 90 hrs pw = 4,680 hrs pa If 2 staff = 9360 person hours pa Productive annual hours per staff = 1,400
CCTV / Help point monitoring		0	staff	26,000	-	Assume this can be accomodated through existing resource in Southeastern or KCC
Utilities - station		1	item	5,000	5,000	Estimate
Utilities - car park		1	item	2,000	2,000	Estimate
Car park enforcement		3	staff	22,500	67,500	Estimate assuming enforcement by private operator
Lift maintenance		0	item	-	-	Included in LTC to Network Rail
Station maintenance		1	item	15,000	15,000	Assume no additional staff required
Car park maintenance		1	item	5,000	5,000	Assume no additional staff required
Station telecoms maintenance & fibre lease		1	item	10,000	10,000	Subcontract

TOTAL operating cost per annum	**£ 187,500**

Cost Base is Q1 2010