

## APPENDIX 4 ANCILLIARY RAIL ISSUES

The site lies between approximate railway mileage of 70m and 70.25m, 1.25 miles north of Ipswich Station and 0.5miles north of East Suffolk Junction which marks the end of the freight sidings at Ipswich and where the route to East Suffolk and Felixstowe leaves the main line. The railway past the site consists of two tracks. The adjacent (west) track is the 'Down' line used by trains travelling northwards in the Norwich direction. The far (east) track is the 'Up' line used by trains travelling south towards Ipswich and London.

The railway runs approximately south east to north west past the site. The railway appears slightly elevated on embankment with underline bridges across the River Gipping immediately to the south and Sproughton road immediately to the north of the site. Thus any rail connection would need to be made at some point between these bridges to avoid the cost of bridge widening – at the existing railway spur. As there is only 400m between these structures this would tend to preclude the provision of a siding loop parallel to the main line as the maximum length of useable loop would be limited to less than 200m. This suggests that any connection would have to comprise a simple spur curving into the site where one or more sidings could be provided. Such a spur may require an earthwork embankment across the site if gradients from the main line are critical.

A typical arrangement for a basic rail freight siding reached directly from a main line is for inbound trains to be routed so that they arrive on the running line adjacent to the terminal, in this case the north bound down line. Depending on the extent of facilities provided trains are either signalled into a parallel loop off the main line or are brought to a halt on the main line and then reverse into a siding. On departing outbound trains then continue in the same direction, in this case northwards. If this is the 'wrong' direction the train has to continue until it reaches a loop where the locomotive can run round its train and then cross over onto the opposite line, in this case the southbound up line, and then run back past the siding. Such facilities are potentially available 3.5miles to the north at Claydon or 10miles to the north at Stowmarket.

This keeps track and signalling requirements to a simple minimum and avoids the complexity and cost of providing and signalling cross-overs between the running lines. A drawback with the stop and reverse procedure is that the train occupies the running line for longer, reducing capacity for other trains and may therefore be unacceptable or too restrictive for busy routes.

However at Sproughton the proximity to East Suffolk Junction may favour the provision of a short length of reversible signalling on the down line so that trains could be worked as short trip workings to and from the freight yard at Ipswich where there are crossovers and sidings that would enable trains can be split into sections and then re-marshalled as required.

Assuming planning restrictions do not intervene, the need and business case for any rail freight connection to the site will be dependant on the end use for the site. In the UK rail freight is generally only economic in train load consignments for haul distances of over 100miles, even where rail facilities are already in place. As a consequence wagon load and part train load services are very limited nationally and such traffics tend to go by road. Thus for a rail connection to be viable at Sproughton an end user would need to generate train load quantities to or from another rail connected facility or terminal at least 100 miles away. Such an end user

may well be unlikely and would probably require the bulk of the site to be developed specifically with this use in mind.

However as an alternative to train load consignments or dependence on the limited wagonload or part train load rail network it may be possible to take advantage of the network of container (Freightliner) trains serving the Port of Felixstowe. These trains all pass through Ipswich. Additional container wagons could be attached/ detached to/from these trains at Ipswich thus creating a network of possible routes for containerised consignments between Sproughton and a range of 'Freightliner' terminals in the UK. It is stressed however that to our knowledge such arrangements have not been made before and in practice there may be limited capacity to attach additional wagons on these services due to restrictions on train weight or length and timings.

In addition to these container services which are understood to be operated by both EWS and Freightliner there is other rail freight in the area with grain cement and aggregate sidings in the vicinity. This may help in that crew and facilities would be available locally with route knowledge. The costs for installation of a rail spur are identified as circa £6,325,000 which is comprised of:

Turnout in main line:	£125,000
2.5km track @ £300/m:	£750,000
Turnouts 5 at 40k:	£200,000
Track Cost:	£1,250,000
Signalling:	£2,000,000 to £3,000,000

These costs are subject to Strategic Freight grants, further detailed discussions with rail network operators and detailed design

The type of potential end use of the site should be considered. If there is potential for this end use to generate rail freight flows as described above then a feasibility study should be conducted for a rail connection. This study should consider the type and quantity of flows, suitable layouts and signalling and the practicalities of piggy backing on existing rail freight services. The potential for Government rail freight grants towards the cost of facilities and operation should also be explored together with Sensitive Lorry Miles which are provided in a simplistic form overleaf. Applications for Freight Facilities Grants (FFG) are also opened up as part of the proposal for the rail spur.

## Sensitive Lorry Mileage Calculations

The Site to Harwich

Distance	Instruction	Road Name	For	Direction	Distance: 14.7 miles
0.0	Depart On	Butter Market	0.1	East	
0.1	Turn left onto	B1076	0.2	North	
0.3	Turn Right Onto	A1071	0.3	Southwest	
0.6	Turn left onto	B1075	1.2	East	
1.8	Turn left onto	A1156	1.5	Southwest	
3.3	Bear left onto	A1189	1.1	South	
4.4	Continue straight on	A12	1.7	East	
6.1	Bear Right Onto	A14	5.1	Southwest	
11.1	Continue straight on	A154	0.8	Southwest	
11.9	Bear left onto	A1021	0.4	East	
12.4	Bear left onto	High Road East	0.7	East	
13.0	Continue straight on	Cliff Road	0.9	East	
13.9	Bear Right Onto	Ferry Road	0.6	Northeast	
14.4	Bear Right Onto	Unknown Road	0.3	Northeast	
14.7	Arrive at destination	Unknown Road		No Direction	

Environmental Benefit for journey from IP1 1 to IP11 9 is £7.48

Road Type	Rate Per Mile	England			Scotland			Wales			Total Distance		Grant
		Miles	Km's	Total (£)	Miles	Km's	Total (£)	Miles	Km's	Total (£)	Miles	Km's	
Low Congested Motorway	£0.04	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	£0.00
Medium Congested Motorway	£0.27	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	£0.00
High Congested Motorway	£0.69	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	£0.00
Conurbation - Trunk & Principal	£1.38	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	£0.00
Conurbation - Other	£1.74	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	£0.00
Rural & Urban - Trunk & Principal	£0.53	10.8	17.4	5.72	0.0	0.0	0.00	0.0	0.0	0.00	10.8	17.4	£5.72
Rural & Urban - Others	£0.45	3.9	6.2	1.76	0.0	0.0	0.00	0.0	0.0	0.00	3.9	6.2	£1.76
<b>Totals</b>		<b>14.7</b>	<b>23.6</b>	<b>7.48</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>14.7</b>	<b>23.6</b>	<b>£7.48</b>

Table Appendix 4-1 Sensitive Lorry Miles Calculation - The Site to Harwich

**The Site** to Felixstowe

Distance: 23.3 miles 0.0	Depart On	Unknown Road	0.1	North
0.1	Turn Right Onto	Unknown Road	0.0	North
0.1	Bear left onto	Sproughton Road	0.1	Northwest
0.2	Bear left onto	A14	1.7	South
2.0	Continue straight on	A1214	0.2	Southwest
2.1	Bear left onto	A12	5.5	East
7.6	Bear left onto	B1070	3.4	South
11.0	Turn Right Onto	A137	0.8	South
11.8	Continue straight on	B1352	8.7	East
20.5	Bear left onto	A120	0.0	East
20.5	Bear left onto	Church Hill	0.0	South
20.5	Turn left onto	B1352	2.8	East
23.3	Turn left onto	Kingsway	0.0	North
23.3	Arrive at destination	Kingsway		No Direction

Environmental Benefit for journey from IP1 5 to CO12 3 is £11.15

Road Type	Rate	England			Scotland			Wales			Total Distance		Grant
		Miles	Km's	Total	Miles	Km's	Total(£)	Miles	Km's	Total(£)	Miles	Km's	
Low Congested Motorway	£0.04	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	£0.00
Medium Congested Motorway	£0.27	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	£0.00
High Congested Motorway	£0.69	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	£0.00
Conurbation - Trunk & Principal	£1.38	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	£0.00
Conurbation – Other	£1.74	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	£0.00
Rural & Urban - Trunk & Principal	£0.53	8.2	13.2	4.35	0.0	0.0	0.00	0.0	0.0	0.00	8.2	13.2	£4.35
Rural & Urban – Others	£0.45	15.1	24.3	6.80	0.0	0.0	0.00	0.0	0.0	0.00	15.1	24.3	£6.80
<b>Totals</b>		<b>23.3</b>	<b>37.5</b>	<b>11.15</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>23.3</b>	<b>37.5</b>	<b>£11.15</b>

**Table Appendix 4-2 Sensitive Lorry Mile Calculation - The Site to Felixstowe**