

**THE FELIXSTOWE BRANCH LINE AND IPSWICH YARD
IMPROVEMENT ORDER**

APPENDICES TO PROOF OF EVIDENCE

of

Steve Purnell MSc, DipHTE

Environmental Impact Assessment



Port of Felixstowe



Appendix SP1

Letter from Network Rail to HPUK



East Anglia House
12-34 Great Eastern Street
London
EC2A 3EH
DX 134313 Broadgate Circus
Tel. 020 7904 4298

Ian Chadney
Senior Manager - Port Development
Hutchison Ports (UK) Limited
Tomline House
The Dock
FELIXSTOWE
IP11 3SY

27 January 2006

Your ref:
Our ref: HHR947/CS/WB

Dear Ian

Re: Requirement for footbridge at Westerfield

In connection with the project to upgrade the Felixstowe branch line to twin track, you recently requested confirmation of Network Rail's position with respect to the requirement for a footbridge at Westerfield.

Following an assessment of the risk associated with Westerfield Automatic Half Barrier crossing, taking into account the anticipated increase in freight services on the Felixstowe branch line, the AD Little risk model version 3.1 indicates that the level of risk at Westerfield would be 1:95,000. A risk level of 1:100,000 is considered to be 'broadly acceptable' and mitigation measures should be considered when, as in this case, the risk is greater than this. Therefore Westerfield is to be upgraded to a full barrier level crossing with closed circuit television.

No risk assessment tool currently exists for CCTV crossings and there is no legal requirement at all to provide a footbridge for safety reasons, other than to aid people wishing to cross platforms at a time when barriers are down.

HMRI guidance suggests that barrier downtimes should ideally be less than 30 minutes in every hour. Timetable modelling undertaken by Network Rail indicates that the anticipated barrier downtime at Westerfield is well within acceptable limits.

I hope this clarifies the situation.

Yours sincerely

A handwritten signature in purple ink, appearing to read 'Chris Smythe', with a stylized flourish underneath.

Chris Smythe
Senior Commercial Scheme Sponsor

Appendix SP2

Table of Potential Environmental Impacts

Table 7.1 Permanent and Operational Impacts

Impact Type	Key Potential Impacts (without mitigation)	Mitigation	Residual Impact	Means by which Mitigation will be Delivered
Land Use	Land take to accommodate the scheme, predominantly agricultural land	Owners will be compensated for temporary and permanent loss of property or rights in property	No significant adverse impact	Compensation under the Compensation Code, where applicable
Noise & Vibration	Operational noise from increased rail activity	Noise insulation or screening for identified/eligible residential properties	Noise levels to be within standards	Noise Insulation Regulations, 1996
		Improvement works to existing track joints at level crossings will reduce operational noise	Beneficial effects for adjoining residents	Planning Condition (22)
	Groundborne vibration resulting from train movements	Improvement works to the existing track will assist in reducing the risk of structural damage to properties from groundborne vibration	No significant adverse impact	Deed of Undertaking to Local Planning Authority
		Use of a barrier to provide noise screening at Ipswich Yard	No significant adverse impact	Planning Condition (22)
		Existing and proposed noise from trains standing at signals and standing in Ipswich Yard	Timetable and signal positions to be refined to minimise requirement for standing trains	No significant adverse impact
Increased horn soundings due to the increase in the number of trains and potential addition of 'whistle boards'	Certain foot crossings to be permanently closed, which will reduce the total number of necessary whistle boards and horn soundings	No significant adverse impact	Included in proposed Order	

Impact Type	Key Potential Impacts (without mitigation)	Mitigation	Residual Impact	Means by which Mitigation will be Delivered
		Operators to be encouraged to fit lower sound pressure level horns to trains in accordance with new RSSB standards	No significant adverse impact	Railway Group Standard GM/RT2484 – Audibility Requirements for Trains provides for reduced sound levels on new locomotives
Landscape & Visual	Localised visual impacts and landscape sensitivity as a result of the presence and use of the new track, including:	High standard of design will be used for the new structures, retaining walls and level crossings	No significant adverse impact	Planning Condition (3)
	<ul style="list-style-type: none"> - Operational trains - Vegetation / tree loss - Road realignments - Closure of Rights of Ways 	Reinstatement will be undertaken in a sensitive manner and materials and finishes will respect the surrounding townscape/landscape (detailed though a landscape design for the works which will be agreed with the local authorities during detailed design)	No significant adverse impact	Planning Condition (3)
		Tree and shrub replacement planting will follow the completion of works	No significant adverse impact	Planning Condition (8)
		Within Ipswich Yard, the proposed noise barrier for residents along Ranelagh Road is to be of transparent acrylic construction, to minimise visual intrusion and reducing shading of the gardens in this area	No significant adverse impact	Planning Condition (3 and 22)
Ecology and Nature Conservation	Loss and severance of available habitat (acid grassland, reptile and invertebrate habitat)	Scheme design will minimise losses of available habitats	Minor adverse impact until vegetation fully regrown	Planning Condition/CoCP (20)
		Reinstatement of vegetation (particularly grassland) wherever practical will follow the completion of works		

Impact Type	Key Potential Impacts (without mitigation)	Mitigation	Residual Impact	Means by which Mitigation will be Delivered
	Loss of notable plant species along the Branch line and within Ipswich Yard	Minimise potential impacts on notable plant species through marking the location of the species and, wherever practicable, protective fencing to prevent further disturbance	No significant adverse impact	Planning Condition/CoCP (20)
Water Resources	Flooding potential due to alterations to current drainage patterns surrounding Felixstowe branch line, Westerfield and Ipswich Yard	Adequate drainage of the new track will be provided in accordance with Network Rail Standard using materials that encourage attenuation of oils and pollutants	No significant adverse impact	Network Rail Standards RT/CE/C/006 will apply to works contract
	Potential spillage of chemicals within Ipswich Yard during on-going operations	Appropriate drainage system to be installed at Ipswich Yard in consultation with Anglian Water		
		Pollution prevention and control, and emergency response measures will be developed for the scheme during detailed design in accordance with guidance such as Pollution Prevention Guideline (PPG)21 Pollution Incident Response Planning and Network Rail procedures	No significant adverse impact	Planning Condition (15)
	Impacts on groundwater and surface water quality due to potential contamination of drainage water from Ipswich Yard	Oil interceptors as part of the drainage system for Ipswich Yard will be subject to frequent maintenance checks. Any specific requirements, particularly concerning urban waste water drainage from Ipswich Yard, will be identified during the detailed design phase of the scheme.	Minor adverse significance	Planning Condition (15)

Impact Type	Key Potential Impacts (without mitigation)	Mitigation	Residual Impact	Means by which Mitigation will be Delivered
Archaeology & Cultural Heritage	Impact on zones of medium and low archaeological potential	An archaeology scheme of investigation will be prepared in consultation with Suffolk County Archaeology Service and appropriate arrangements will be made to preserve finds record and publish results of excavations	No significant adverse impacts on listed buildings or archaeology	Planning Condition (10)
Traffic & Transport	Increased waiting time for pedestrians at crossings Increased safety risk at foot crossings as a result of dualling of the track	Safer crossing facilities Straightening of crossings, installation of crossing panels and repositioning of whistle boards	No significant impact on pedestrian users No significant impact on pedestrian users	Included in proposed Order Included in proposed Order

Table 7.2 Temporary Impacts

Impact Type	Key Potential Impacts (without mitigation)	Mitigation	Residual Impact	Means by which Mitigation will be Delivered
Land Use	Construction impacts of temporary work sites	Temporary land used for worksites will be minimised	Minor adverse temporary land use and land-take impacts	CoCP (Condition 20)
		Construction will be phased to minimise impacts on seasonal activity		CoCP (Condition 20)
Noise & Vibration	Construction noise and disturbance to residents along the Branch line, at Westerfield and at Ipswich Yard	A Section 61 consent for the proposed works will be sought with the local authorities concerned. At this stage, properties eligible for sound insulation and properties where the offer of temporary re-housing of the residents may be appropriate will be identified	Moderate adverse residual impacts	Planning Condition/CoCP (20)
		Contractor has a general duty to employ Best Practicable Means to minimise nuisance from noise		CoCP (Condition 20)
		Modern, silenced and well maintained plant fitted with efficient attenuators or acoustic covers		CoCP (Condition 20)
		Temporary noise screening of machinery		CoCP (Condition 20)
		Location of equipment as far as possible from noise sensitive receptors		CoCP (Condition 20) Planning Condition at Morston Hall Cottages (12)

Impact Type	Key Potential Impacts (without mitigation)	Mitigation	Residual Impact	Means by which Mitigation will be Delivered
	Construction traffic noise	HGV traffic accessing the construction site will normally occur during the normal working hours	No adverse residual impacts	CoCP (Condition 20)
Landscape & Visual	Visual impacts as a result of landscape alteration during the construction period (as a result of contractor compounds, site offices, temporary traffic and pedestrian management, temporary lighting, soil stripping, piling, construction machinery, etc)	Mitigation through worksite management: <ul style="list-style-type: none"> - 'Good housekeeping' policy - Materials and machinery stored tidily - Road cleansing - Temporary buildings located as far as possible from residential - Traffic management - Reinstatement of landscape - Protection of trees - 	The temporary impacts will result in short term adverse impacts on the landscape character and views in the area of moderate significance	CoCP (Condition 20) Planning Condition at Morston Hall Cottages (12)
Ecology & Nature Conservation	Disturbance of designated – wetland sites	Works in close proximity to wetland sites will be timed to avoid the overwintering period for wild fowl, to minimise any potential disturbance	Negligible adverse residual impact	CoCP (Condition 20)
	Disturbance or damage to notable plant species	Avoidance of areas of notable plant species wherever practicable, as well as fencing off Employment of an ecologist to advise during construction	Negligible adverse residual impact	CoCP (Condition 20)

Impact Type	Key Potential Impacts (without mitigation)	Mitigation	Residual Impact	Means by which Mitigation will be Delivered
	Loss or removal of trees	If construction will result in the permanent loss of trees, an equivalent number of those lost will be replaced as part of the reinstatement of the site	Negligible adverse residual impact	CoCP (Condition 20)
		Employment of an ecologist to advise during construction	Negligible adverse residual impact	CoCP (Condition 20)
	Disturbance or damage to Biodiversity Action Plan habitats – acid grasslands	Minimise land to be used avoiding acid grasslands	Negligible residual adverse affects	CoCP (Condition 20)
	Loss or damage to trees	Minimise active working areas		CoCP (Condition 20)
		Existing trees and woodland to be protected during construction		CoCP (Condition 20) Planning Condition (9)
		Any tree work (eg removal, lopping) will be undertaken in accordance with British Standard (BS) 3998:1989 and preferably not during the period February to August (inclusive)	No residual adverse impacts	CoCP (Condition 20)
		Replacement planting of trees and woodland		Planning Condition (19)
	Disturbance to reptiles	Translocation to suitable receptor site prior to construction, in agreement with English Nature and Suffolk Wildlife Trust		CoCP (Condition 20) Planning Condition (18)

Impact Type	Key Potential Impacts (without mitigation)	Mitigation	Residual Impact	Means by which Mitigation will be Delivered
		Creation of receptor sites		Planning Condition (18)
		Reptile proof fencing	No residual adverse impacts	CoCP (Condition 20)
	Disturbance to bat roosts	An emergence survey will be conducted to confirm the presence of bat species. Where bats are found Defra Licences will be obtained and required measures followed	No residual adverse impacts	Planning Condition (16) Defra Licence
	Habitat loss and disturbance to breeding birds	Employment of an ecologist to advise during construction	No residual adverse impacts	CoCP (Condition 20)
	Loss of invertebrates habitat	Minimise working areas		CoCP (Condition 20)
		Reinstate vegetation following the completion of works		Planning Condition (19)
Water Resources	Excavation of earthworks and general site works	Prevention of sedimentation and contamination in accordance with Environment Agency PPG5 and PPG6, via: <ul style="list-style-type: none"> - Stockpiles of earth/ballast situated away from areas at risk of flooding - Dampening down of dusty ground - Vegetation stripping to be kept to a minimum - Seeding and reinstatement of vegetation as soon as possible following works 	Residual impacts re likely to be minor	CoCP (Condition 20)

Impact Type	Key Potential Impacts (without mitigation)	Mitigation	Residual Impact	Means by which Mitigation will be Delivered
	Damage to agricultural irrigation pipes	With assistance from the third parties involved, the location of any agricultural irrigation pipes will be identified during the preparatory works stage	Residual impacts re likely to be minor	CoCP (Condition 20)
	Concrete Works	Controlled disposal and usage methods	Residual impacts re likely to be minor	CoCP (Condition 20)
	Risk of spillage during storage and use of oil, fuel, and chemicals	Dedicated areas for fuel and oil delivery, storage, transfer and refuelling subject to control and treatment prior to discharge	Residual impacts re likely to be minor	CoCP (Condition 20) Planning Condition (15)
		Use and storage of hazardous substances in accordance with the Control of Substances Hazardous to Health Regulations, Management of Health & Safety at Work Regulations, and Section 34, Environment Protection Act		CoCP (Condition 20)
	Disturbance of contaminated ballast or formation materials	Removal and treatment of existing ballast using conventional best practice rail industry techniques		CoCP (Condition 20) Planning Condition at Ipswich Yard (14)
Traffic and Transport	Suspension of passenger services to Felixstowe during track possession for construction	Replacement bus services will be provided	No significant adverse impacts	Deed of Undertaking
	Proposed temporary Public Right of Way closure and diversions	Diversion routes for temporarily stopped up footpaths to be provided where no suitable alternative exists	Residual impacts are likely to be minor	Diversion routes defined in proposed Order Planning Condition (13)

Impact Type	Key Potential Impacts (without mitigation)	Mitigation	Residual Impact	Means by which Mitigation will be Delivered
Air Quality	Generation of dust on worksites or construction areas	Regular cleaning and maintenance of site, highway and haul roads	Residual adverse impact will be minor	CoCP (Condition 20)
		Vehicles on site will be subject to speed restrictions		CoCP (Condition 20)
		Loads in transit will be enclosed or sheeted		CoCP (Condition 20)
		Wheel wash facility for all vehicles prior to leaving the site		CoCP (Condition 20)
		Water misting of haul roads and stock-piles		CoCP (Condition 20)
		Arrangements will be made for regular liaison meetings with representatives of the authority / regulator, client, contractor, the local community and any other interested parties. The meetings would be an opportunity to address questions or complaints on environmental aspects of the project		CoCP (Condition 20)

Impact Type	Key Potential Impacts (without mitigation)	Mitigation	Residual Impact	Means by which Mitigation will be Delivered
Contaminated Land	Potential contaminated land and water from previous activities	<p>Detailed site investigation for identification of the presence of contaminants to inform:</p> <ul style="list-style-type: none"> - the level of required remediation - the removal and disposal at a licensed approved site - isolation and treatment - personnel to wear protective equipment 	Minor adverse residual impacts on water resources or other receptors	CoCP (Condition 20) Planning Condition at Ipswich Yard (14)
		<p>For areas where site investigation reveals the presence of contaminated land, a Land Assessment Report and Management Plan shall be prepared to identify necessary remediation measures to render the land fit for the intended purpose</p>		CoCP (Condition 20) Planning Condition (14)

Appendix SP3

Summarised Results of Traffic Counts at Level
Crossings

COUNT ON US

BARRIER DOWN TIME CENSUS SUMMARY SHEET

JANUARY 2006

**THORPE LANE
LEVEL CROSSING SURVEY**

30777

SITE:	THORPE LANE	LINE REF:	FEL
MAP REF:	51.99115N 1.30084E	LOCATION:	Thorpe Lane
DATE:	07 Jan 06 – 15 Jan 06	SIGNATURE(s):	DW

DAILY SUMMARY – TOTALS									
DATE	07	08	09	10	11	12	13	14	15
BARRIER DOWN TIME	0.43.34	0.11.58	1.04.38	1.11.37	1.12.21	1.14.43	1.11.41	0.41.47	0.11.52

SUMMARY – LONGEST HOURLY BARRIER DOWN TIME IN PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
HOURLY BARRIER DOWN TIME	9 mins 10 secs	2100 – 2200	12 Jan 06
PASSENGER TRAINS	1	but includes	
FREIGHT TRAINS	4	2 min 30 secs when	
LIGHT LOCOS	0	no train observed	

Note: Best natural down time was at 2200 hours on 10 Jan 06 with 7 mins 01 sec covering 4 freight and 1 passenger train.

SUMMARY – LONGEST QUARTER HOUR BARRIER DOWN TIME IN PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
HOURLY BARRIER DOWN TIME	4 mins 26 secs	0630 – 0645	13 Jan 06
PASSENGER TRAINS	1	but includes	
FREIGHT TRAINS	1	2 min 25 secs when	
LIGHT LOCOS	0	no train observed	

Note: Best natural down time was at 2215 hours on 10 Jan 06 with 3mins 28 secs for 2 freight

SUMMARY – BARRIER DOWN TIMES CORRESPONDING TO BUSIEST HOURLY TRAFFIC IN 9 DAY PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
TOTAL PEDESTRIANS	9	1500 - 1600	15 Jan 06
ROAD VEHICLES	41	1500 - 1600	14 Jan 06

SUMMARY – BARRIER DOWN TIMES CORRESPONDING TO BUSIEST QUARTER HOUR TRAFFIC IN 9 DAY PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
TOTAL PEDESTRIANS	6	1215 -1230	15 Jan 06
ROAD VEHICLES	21	1530 - 1545	14 Jan 06

SUMMARY – BARRIER DOWN TIME STATISTICS FOR 9 DAY PERIOD			
	85 PERCENTILE	MEAN AVERAGE	STANDARD DEVIATION
HOURLY DOWN TIME FROM ALL TRAINS	282	190.76	98.448
PROPOSED DOWNTIMES	470	376	
DOWN TIME FOR PASSENGER TRAIN	45	40.111	7.329
DOWN TIME FOR FREIGHT TRAIN	95	73.96	17.831
DOWN TIME FOR LIGHT LOCO TRAIN	45.9	42.179	4.431
PASSENGER TRAIN PASSING TIME	2	1.333	0.504
FREIGHT TRAIN PASSING TIME	27	21.724	6.820
LIGHT LOCO TRAIN PASSING TIME	1	1	0

COUNT ON US

BARRIER DOWN TIME CENSUS SUMMARY SHEET

JANUARY 2006

**MORSTON HALL
LEVEL CROSSING SURVEY**

30777

SITE:	MORSTON HALL	LINE REF:	FEL
MAP REF:	51.99768N 1.29119E	LOCATION:	Morston Hall
DATE:	08 Jan 06 – 15 Jan 06 + 28 Jan 06	SIGNATURE(s):	DW

DAILY SUMMARY – TOTALS									
DATE	08	09	10	11	12	13	14	15	28
BARRIER DOWN TIME	0.18.27	0.55.15	0.59.53	0.58.35	0.59.28	0.59.12	0.37.02	0.10.28	0.38.49

SUMMARY – LONGEST HOURLY BARRIER DOWN TIME IN PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
HOURLY BARRIER DOWN TIME	6 mins 14 sec	22.00 – 23.00	10 Jan 06
PASSENGER TRAINS	1		
FREIGHT TRAINS	4		
LIGHT LOCOS	0		

SUMMARY – LONGEST QUARTER HOUR BARRIER DOWN TIME IN PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
HOURLY BARRIER DOWN TIME	3 min 6 sec	22.15 – 22.30	10 Jan 06
PASSENGER TRAINS	0		
FREIGHT TRAINS	2		
LIGHT LOCOS	0		

SUMMARY – BARRIER DOWN TIMES CORRESPONDING TO BUSIEST HOURLY TRAFFIC IN 9 DAY PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
TOTAL PEDESTRIANS	6	09.00 – 10.00	28 Jan 06
ROAD VEHICLES	10	13.00 – 14.00	10 & 11 Jan 06

SUMMARY – BARRIER DOWN TIMES CORRESPONDING TO BUSIEST QUARTER HOUR TRAFFIC IN 9 DAY PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
TOTAL PEDESTRIANS	4	09.30 – 09.45	28 Jan 06
ROAD VEHICLES	7	13.15 – 13.30	10 Jan 06

SUMMARY – BARRIER DOWN TIME STATISTICS FOR 9 DAY PERIOD			
	85 PERCENTILE	MEAN AVERAGE	STANDARD DEVIATION
HOURLY DOWN TIME FROM ALL TRAINS	235	162.1	79.08
PROPOSED DOWNTIMES	408	326	
DOWN TIME FOR PASSENGER TRAIN	42	35.41	6.35
DOWN TIME FOR FREIGHT TRAIN	81	63.74	16.27
DOWN TIME FOR LIGHT LOCO TRAIN	43.8	41.57	14.05
PASSENGER TRAIN PASSING TIME	2	1.35	0.47
FREIGHT TRAIN PASSING TIME	23	19.2	5.57
LIGHT LOCO TRAIN PASSING TIME	1	1	0.2

COUNT ON US

BARRIER DOWN TIME CENSUS SUMMARY SHEET

JANUARY 2006

**WESTERFIELD
LEVEL CROSSING SURVEY**

30777

SITE:	WESTERFIELD	LINE REF:	ESK
MAP REF:	52.08108N 1.16543E	LOCATION:	Westerfield
DATE:	07 Jan 06 – 15 Jan 06	SIGNATURE(s):	DW

DAILY SUMMARY – TOTALS									
	1	2	3	4	5	6	7	8	9
BARRIER DOWN TIME (h.mm.ss)	1.38.54	0.49.31	2.09.41	2.26.52	2.07.35	2.22.47	2.18.16	1.48.33	0.44.59

SUMMARY – LONGEST HOURLY BARRIER DOWN TIME IN PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
HOURLY BARRIER DOWN TIME	13 mins 15 secs	22.00 – 23.00	10 Jan 05
PASSENGER TRAINS	3		
FREIGHT TRAINS	5		
LIGHT LOCOS	0		

SUMMARY – LONGEST QUARTER HOUR BARRIER DOWN TIME IN PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
QUARTER HOUR BARRIER DOWN TIME	5mins 54 secs	17.00 – 17.15	07 Jan 05
PASSENGER TRAINS	2		
FREIGHT TRAINS	1		
LIGHT LOCOS	0		

SUMMARY – BARRIER DOWN TIMES CORRESPONDING TO BUSIEST HOURLY TRAFFIC IN 9 DAY PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
TOTAL PEDESTRIANS	12	10.00 – 11.00	15 Jan 06
ROAD VEHICLES	496	08.00 – 09.00	10 Jan 06

SUMMARY – BARRIER DOWN TIMES CORRESPONDING TO BUSIEST QUARTER HOUR TRAFFIC IN 9 DAY PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
TOTAL PEDESTRIANS	9	10.45 – 11.00	15 Jan 06
ROAD VEHICLES	140	08.15 – 08.30	12 Jan 06

SUMMARY – BARRIER DOWN TIME STATISTICS FOR 9 DAY PERIOD			
	85 PERCENTILE	MEAN AVERAGE	STANDARD DEVIATION
HOURLY DOWN TIME FROM ALL TRAINS	00.08.55	00.06.28	145.95
DOWN TIME FOR PASSENGER TRAIN	101 sec	84 sec	29.01
DOWN TIME FOR FREIGHT TRAIN	144 sec	106 sec	34.23
DOWN TIME FOR LIGHT LOCO TRAIN	137 sec	90 sec	42.29
PASSENGER TRAIN PASSING TIME	10 sec	6.53 sec	3.28
FREIGHT TRAIN PASSING TIME	37 sec	31.41 sec	9.19
LIGHT LOCO TRAIN PASSING TIME	3 sec	2.27 sec	1.34

COUNT ON US

BARRIER DOWN TIME CENSUS SUMMARY SHEET

JANUARY 2006

**TRIMLEY
LEVEL CROSSING SURVEY**

30777

SITE:	TRIMLEY	LINE REF:	FEL
MAP REF:	51.97566N 1.31717E	LOCATION:	Trimley
DATE:	07 Jan 06 – 15 Jan 06	SIGNATURE(s):	DW

DAILY SUMMARY – TOTALS									
DATE	07	08	09	10	11	12	13	14	15
BARRIER DOWN TIME	3.04.08	0.55.15	4.01.50	4.54.20	4.25.40	4.26.10	4.23.59	3.12.21	0.53.32

SUMMARY – LONGEST HOURLY BARRIER DOWN TIME IN PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
HOURLY BARRIER DOWN TIME	33mins 07secs	1100 - 1200	10 Jan 06
PASSENGER TRAINS	2		
FREIGHT TRAINS	2		
LIGHT LOCOS	0		

SUMMARY – LONGEST QUARTER HOUR BARRIER DOWN TIME IN PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
HOURLY BARRIER DOWN TIME	14mins 59 secs	2030 -2045	11 Jan 06
PASSENGER TRAINS	1		
FREIGHT TRAINS	1		
LIGHT LOCOS	1		

SUMMARY – BARRIER DOWN TIMES CORRESPONDING TO BUSIEST HOURLY TRAFFIC IN 9 DAY PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
TOTAL PEDESTRIANS	24	1500 - 1600	08 Jan 06
ROAD VEHICLES	42	1400 - 1500	13 Jan 06

SUMMARY – BARRIER DOWN TIMES CORRESPONDING TO BUSIEST QUARTER HOUR TRAFFIC IN 9 DAY PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
TOTAL PEDESTRIANS	11	1115 - 1130	15 Jan 06
ROAD VEHICLES	20	1430 - 1445	13 Jan 06

SUMMARY – BARRIER DOWN TIME STATISTICS FOR 9 DAY PERIOD			
	85 PERCENTILE	MEAN AVERAGE	STANDARD DEVIATION
HOURLY DOWN TIME FROM ALL TRAINS	1100.4	767.852	332.593
DOWN TIME FOR PASSENGER TRAIN	238.95	205.806	99.954
DOWN TIME FOR FREIGHT TRAIN	386.9	297.32	112.537
DOWN TIME FOR LIGHT LOCO TRAIN	238.2	195.8	100.964
PASSENGER TRAIN PASSING TIME	7	4.963	2.436
FREIGHT TRAIN PASSING TIME	99	64.188	32.514
LIGHT LOCO TRAIN PASSING TIME	3	1.833	0.937

COUNT ON US

BARRIER DOWN TIME CENSUS SUMMARY SHEET

JANUARY 2006

LEVINGTON

LEVEL CROSSING SURVEY

30777

SITE:	LEVINGTON	LINE REF:	FEL
MAP REF:	52.00718N 1.27887E	LOCATION:	Levington
DATE:	7 - 13 Jan 06 + 15 & 21 Jan 06	SIGNATURE(s):	DW

DAILY SUMMARY – TOTALS									
DATE	7	8	9	10	11	12	13	15	21
BARRIER DOWN TIME (min.secs)	32.45	16.31	48.53	59.25	57.10	56.02	53.18	09.25	34.34

SUMMARY – LONGEST HOURLY BARRIER DOWN TIME IN PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
HOURLY BARRIER DOWN TIME	4 mins 56 secs	2100 -2200	12 Jan 06
PASSENGER TRAINS	1		
FREIGHT TRAINS	4		
LIGHT LOCOS	0		

SUMMARY – LONGEST QUARTER HOUR BARRIER DOWN TIME IN PERIOD Normal Operations			
	TOTAL / NUMBER	TIME PERIOD	DATE
HOURLY BARRIER DOWN TIME	2 mins 46 secs	0615 -0630	10 Jan 06
PASSENGER TRAINS	1		
FREIGHT TRAINS	1		
LIGHT LOCOS	1		

SUMMARY – LONGEST QUARTER HOUR BARRIER DOWN TIME IN PERIOD Maintenance Loco			
	TOTAL / NUMBER	TIME PERIOD	DATE
HOURLY BARRIER DOWN TIME	7 mins 16 secs	22.40.16 -22.47.17	08 Jan 06
PASSENGER TRAINS	0		
FREIGHT TRAINS	0		
LIGHT LOCOS – Maintenance Loco	1 took 10 secs to pass		

SUMMARY – BARRIER DOWN TIMES CORRESPONDING TO BUSIEST HOURLY TRAFFIC IN 9 DAY PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
TOTAL PEDESTRIANS	4	1100 - 1200	15 Jan 06
ROAD VEHICLES	104	1100 - 1200	21 Jan 06

SUMMARY – BARRIER DOWN TIMES CORRESPONDING TO BUSIEST QUARTER HOUR TRAFFIC IN 9 DAY PERIOD			
	TOTAL / NUMBER	TIME PERIOD	DATE
TOTAL PEDESTRIANS	4	1115 - 1130	15 Jan 06
ROAD VEHICLES	32	1045 - 1100	21 Jan 06

SUMMARY – BARRIER DOWN TIME STATISTICS FOR 9 DAY PERIOD shown in seconds			
	85 PERCENTILE	MEAN AVERAGE	STD DEVIATION
HOURLY DOWN TIME FOR ALL TRAINS	216	151.253	74.852
PROPOSED DOWNTIMES	348	311	
DOWN TIME FOR PASSENGER TRAIN	36	32.974	4.332
DOWN TIME FOR FREIGHT TRAIN	69.1	61.041	10.317
DOWN TIME FOR LIGHT LOCO TRAIN	41.2	53.222	76.712
PASSENGER TRAIN PASSING TIME	2	1.225	0.436
FREIGHT TRAIN PASSING TIME	21.75	18.281	4.677
LIGHT LOCO TRAIN PASSING TIME	2	1.375	1.740

Appendix SP4

Schedule 1 to the Transport and Works
(Applications and Objections Procedure) (England
and Wales) Rules 2000

Statutory Instrument 2000 No. 2190

The Transport and Works (Applications and Objections Procedure) (England and Wales) Rules 2000

SCHEDULE 1

Rules 4(1) and 11(2)

INFORMATION TO BE INCLUDED IN ENVIRONMENTAL STATEMENTS

1. A description of the project, including in particular -

- (a) a description of the physical characteristics of all of the works covered by the application and the land-use requirements during the construction and operational phases;
- (b) a description of the main characteristics of the production processes, for instance, nature and quantity of the materials used;
- (c) an estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation and any others) resulting from the operation of the proposed project.

2. An outline of the main alternatives studied by the applicant and an indication of the main reasons for his choice, taking into account the environmental effects.

3. A description of the aspects of the environment likely to be significantly affected by the proposed project, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors.

4. A description of the likely significant effects of the proposed project on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the project, resulting from -

- (a) the existence of the project,
- (b) the use of natural resources, and
- (c) the emission of pollutants, the creation of nuisances and the elimination of waste,

and the description by the applicant of the forecasting methods used to assess the effects on the environment.

5. A description of the measures envisaged to prevent, reduce and where possible remedy any significant adverse effects on the environment.

6. A non-technical summary of the information provided under paragraphs 1 to 5 above.

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7. An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the developer in compiling the required information.