App/61

# THE FELIXSTOWE BRANCH LINE AND IPSWICH YARD IMPROVEMENT ORDER

## PROOF OF EVIDENCE

**of**

**Steve Purnell MSc, DipHTE**

**Environmental Impact Assessment**

Port of Felixstowe

ERM

# 1 INTRODUCTION

## QUALIFICATIONS AND EXPERIENCE

1.1 My name is Stephen Purnell. I hold a Masters Degree in Transport Planning and Management and a Postgraduate Diploma in Highway and Traffic Engineering. I am an Affiliate of the Institute of Logistics and Transport.

1.2 I am a Partner in Environmental Resources Management (ERM), an international consulting firm, where I hold the position of Head of Transport Projects. In that capacity I am responsible for the company's Environmental Impact Assessment (EIA) and Transport Assessment work for transport infrastructure schemes throughout the UK.

1.3 I have considerable experience of transport projects promoted through the Transport and Works Act 1992, and have undertaken full EIAs for 12 major rail schemes under this process, including the scheme that is the subject of the Felixstowe Branch Line and Ipswich Yard Improvement Order (which I will refer to as "the Order").

1.4 I have, in addition, extensive knowledge of the appraisal of transport strategies and schemes in accordance with Government requirements as set out in its *New Approach to Appraisal*, referred to as NATA. I was one of the principal authors of the environmental components of the Government's *Guidance on the Methodology for Multi-Modal Studies*, known as GOMMMS, which defines the methods for this type of appraisal.

1.5 I have been continuously employed by ERM for over 17 years. Prior to this my professional work was with local authorities where I dealt principally with the development and appraisal of transport policy and infrastructure projects.

### *APPOINTMENT BY HPUK*

1.6 In December 2002 my company was appointed by Hutchison Ports (UK) Limited (HPUK) to undertake a Transport Assessment of the proposed Felixstowe South Reconfiguration (which I will also refer to as "the Reconfiguration"). I was responsible for the overall preparation of the Transport Assessment report (CD/59).

1.7 ERM was also commissioned by HPUK in April 2003 to undertake an appraisal of the Reconfiguration to the requirements of the Department for Transport's *A Project Appraisal Framework for Ports*, which had then just been published and which is based on NATA. I was responsible for this appraisal (which I will refer to as "the NATA report" or "the NATA appraisal").

1.8 ERM was subsequently commissioned by HPUK, in July 2004, to undertake an EIA of the works required to improve the capacity of the Felixstowe branch railway line and Ipswich marshalling yard (which I will refer to as "the branch line scheme" or "the scheme"). I was responsible for the overall preparation of the EIA for the branch line scheme. ERM issued its Environmental Statement (ES) in December 2005 (CD/5), to accompany the Order for the scheme.

1.9 Following the application for the Order, a small number of changes were made to the branch line scheme. As a result of this, an Addendum to the ES (CD/8) (which I will also refer to as "the Addendum") was prepared by ERM under my project direction. The Addendum was issued in May 2006.

*SCOPE OF EVIDENCE*

1.10 My proof of evidence will deal with a number of the matters about which the Secretary of State wishes to be informed, as set out in his Statement of Matters of 28 September 2006. Where I make specific reference to these matters, I will follow the numbering used in the Secretary of State's statement.

1.11 I will also address in my proof of evidence certain issues raised by objectors.

1.12 I will start by describing, in Section 2, the alternatives which HPUK considered in developing the branch line scheme, and setting out the justification for the chosen option (*point 3 in the Statement of Matters*).

1.13 Following this I will identify, in Section 3, the contribution made by the scheme to the Government's sustainable transport policy, summarising the overall benefits (*point 4 in the Statement of Matters*).

1.14 This will be followed, in Section 4, by an analysis of the likely impacts of the scheme on local residents and the environment, in respect of: landscape and visual impacts, nature conservation, water resources and contaminated land (*points 5(b) and 5(c) in the Statement of Matters*). Air quality matters are dealt with by John Drabble in his proof of evidence (App/101).

1.15 I intend to include also in Section 4 a description of the measures proposed to mitigate any adverse impacts of the scheme (*points 8(c), 8(d) and 8(e) in the Statement of Matters*), with the exception of noise and vibration and air quality, which are dealt with by Bernard Postlethwaite (App/81) and John Drabble, respectively.

1.16 In Section 5, I will address the operational effects of the scheme on road traffic (*point 6(b) in the Statement of Matters*).

1.17 I will then set out, in Section 6, the statutory procedural requirements that applied to the preparation of the EIA and the way in which the ES accords with these (*point 10 in the Statement of Matters*).

1.18 In Section 7, I will describe the way in which any environmental impacts, arising from the proposed changes to the Order, have been addressed in the Addendum to the ES (*point 13 in the Statement of Matters*).

1.19 I will then summarise, in Section 8, points made by objectors pertinent to the issues that I address in my proof of evidence, and set out my response to these.

1.20 Finally, in Section 9, I will present my conclusions on the work that I have undertaken.

## 2 *SCHEME ALTERNATIVES*

### *REQUIREMENTS FOR APPRAISAL OF ALTERNATIVES*

2.1 To enable a full consideration of the acceptability of the environmental impacts of a development, it is important to have an understanding of the alternatives to the preferred scheme that have been considered and why these have been rejected. Indeed, The Transport and Works (Applications and Objections Procedure) (England and Wales) Rules 2000 (CD/28) require that an ES contains, amongst other things, "*(in outline) the main alternatives (if any) studied by the applicant, and an indication of the main reasons for choosing the project (or form of the project) proposed, taking into account the environmental effects*" (Schedule 1 to the Rules).

2.2 The ES for the branch line scheme (CD/5) includes a comprehensive description of the appraisal process that was adopted to examine alternatives. This is contained in Section 2.6 of the ES, and also in Annex D of the ES.

2.3 In this section I consider the main alternatives to the scheme which were presented in both the ES and the Addendum.

2.4 I also make reference to a facility that did not form part of the EIA – known as the Ipswich fuel point (*point 5(d) in the Statement of Matters*) – which has been the subject of further work by HPUK.

### *APPROACH ADOPTED BY HPUK*

2.5 Three approaches were taken to the assessment of alternatives, which I describe below.

2.6 First, a high level assessment was carried out by the Joint Study Group (CD/3), which was convened to consider the rail impacts arising from both the Felixstowe South Reconfiguration and the proposed Bathside Bay Container Terminal (now referred to as Harwich International Container Terminal). This work was subsequently checked by Network Rail's Strategic Access Planning (SAP) team to ascertain the options available to HPUK to increase the capacity of the rail network to the Port of Felixstowe. The SAP team also undertook detailed capacity modelling to determine the length of dualling required.

2.7 Second, at a scheme specific level, the Transport Analysis Guidance (TAG) methodology was used to identify the preferred scheme for both the Felixstowe Branch Line and Ipswich Yard. TAG is an updated version of NATA.

2.8 In addition to the two approaches identified above, assessments were carried out of two schemes at Westerfield.

***WORK UNDERTAKEN BY THE JOINT STUDY GROUP***

2.9 The work undertaken by the Joint Study Group preceded the end of the public inquiry into the Felixstowe South Reconfiguration (1) . Its findings were taken into account in the case presented by the Felixstowe Dock and Railway Company, as promoters of the Reconfiguration scheme. The report has, therefore, received the sanction of the Secretary of State for Transport by virtue of the Reconfiguration having been granted planning permission.

2.10 A number of options were considered by the Joint Study Group, which I describe in the following paragraphs.

(1) The Joint Study Group's report was issued on 12 November 2004. The public inquiry ran from 26 October 2004 until 2 December 2004.

2.11 An extension of the existing loop or dualled section between Derby Road and Westerfield was considered and rejected because it would require widening of the existing single track viaduct at Spring Road at an estimated cost of £20 million. The view of the Strategic Rail Authority (SRA) (1) was that the dualled section would be in an unfavourable location to achieve maximum capacity.

2.12 Increasing the line speed to 75 mph was also considered and rejected because there are only a limited number of locations where this speed would be possible and it would not overcome other capacity limitations.

2.13 The conversion of tractive power to overhead line electrification (OLE) was rejected because, although it could increase spare capacity through improved payloads, it could cost around £16 million and would not overcome other capacity limitations as the existing cross-country route is non-electrified.

2.14 Reducing or removing the existing hourly passenger service was considered and rejected.

2.15 The introduction of longer trains to reduce the requirement for new train paths was rejected because special permission to use the West Coast Mainline would be required and this would be the only practical route. Other reasons for dismissing this option were that the cost of extending facilities are high, most inland terminals cannot accept this length of train and there are issues to overcome regarding level crossing clearances and signal spacing

2.16 A reduction in the number of light engine paths (2) could potentially be achieved by timetabling and/or moving the Ipswich fuel point nearer to the

(1) joint authors with HPUK of the Joint Study Group's report (CD/3)
(2) these are explained in Andrew Harston's proof of evidence (App/1)

port terminals. However, through discussions with Network Rail, it was established that this would not deliver the required number of paths.

2.17 A new loop or dualled section between 77 MP and Trimley Junction, with bi-directional signalling to suit reduced headways, was considered as it would achieve a doubling of capacity if the services are "flighted", which means running two or more trains in succession to take maximum advantage of space in the timetable.

2.18 The study concluded that the most effective means of achieving the required increase in capacity, without altering the passenger service, would be to flight all freight services and for these to be timetabled around the passenger service. This would require an additional length of double track in order to substantially increase the overall number of train paths. To ascertain the location and length of track that required dualling Network Rail undertook a network modelling exercise, which I describe below.

***CONTRIBUTION BY NETWORK RAIL'S STRATEGIC ACCESS PLANNING TEAM***

2.19 Network Rail's SAP team undertook a broad review of the Joint Study Group's work to confirm the potential capacity of the routes in question. This work was also undertaken prior to the end of the Felixstowe South Reconfiguration public inquiry, and its results are contained at various points in the Joint Study Group report (CD/3).

2.20 The SAP team was asked to identify any fundamental flaws in the capacity analysis. Their conclusions were that there were none.

2.21 The SAP team study reviewed a number of route sections and concluded that dualling a stretch of the Felixstowe Branch Line combined with improvements at Ipswich Yard would provide the most suitable scheme.

2.22 Subsequent to the Reconfiguration public inquiry, the SAP team undertook a detailed capacity modelling exercise to determine the length of track dualling required. A 4.25 mile stretch of track to be dualled was identified to provide the capacity required. This work is contained in a separate report (CD/91).

***SPECIFIC SCHEME ALTERNATIVES***

***Background***

2.23 Building on the work of the Joint Study Group and Network Rail's SAP team, a number of options that HPUK considered were possibilities to deliver the capacity required were assessed in accordance with the Government's TAG methodology.

2.24 TAG provides detailed guidance on the appraisal of transport projects and wider advice on scoping and carrying out transport studies. It comprises web-based guidance for the appraisal of major public transport schemes and other schemes that require Government approval. An analysis of options was completed against the TAG criteria, comprising environment, economy, safety, accessibility and integration.

2.25 This guidance was used to assess four options on the Felixstowe Branch Line and three options at Ipswich Yard. I briefly describe each option below and also describe the main reasons for selection of the preferred scheme.

***Felixstowe Branch Line***

2.26 The first option considered in greater detail was the extension of the existing loop/dualled section between Derby Road and Westerfield. This would require widening of the existing single track viaduct over Spring Road and the dualled section would pass through a residential area close to Ipswich town

centre. Dualling would still be required to the east of Derby Road to meet capacity requirements. The bridge at Spring Road would require extensive engineering works and it was anticipated this would contribute to significant visual impacts in this urban area due to the nearby open space and County Wildlife Site.

2.27 The second option was to create a new loop or dualling eastwards from Trimley into the Port of Felixstowe's North rail terminal. This would require the acquisition of a significant amount of third party land. In addition, the engineering solution would be problematic due to the steep gradient into the port and the bends and embankments required.

2.28 The dualling would create the need for large scale earthworks which would contribute to adverse landscape and visual impacts. Furthermore, as a result of the gradient trains may be unable to stand safely when awaiting clearance to enter the port necessitating hand brakes being applied for periods of long standing. Dualling would still be required westwards beyond Trimley Station to meet capacity requirements.

2.29 The third option looked at was the creation of a new loop or dualling between Trimley and an area westwards towards Felixstowe Road near the Suffolk Showground. This would run for a distance of approximately 5 km, with appropriate signalling to suit reduced headways. This would double the existing capacity and meet all the proposed modal share obligations of the Felixstowe South Reconfiguration. Trains could be flighted around the existing passenger service.

2.30 This option would result in noise impacts owing to the high number of residential properties adjacent to the route. However, it would be anticipated that the most significant environmental effects would be on heritage resource,

as a result of the direct impacts to the concentration of Scheduled Ancient Monuments around Nacton Village.

2.31 The fourth and final option considered was the creation of a new loop or dualling between Trimley and westwards to the east of Nacton Village, a distance of some 4.25 miles, with appropriate signalling to reduce headways. This would also double the existing capacity and meet all the proposed modal share obligations of the Reconfiguration. Trains could be flighted around the existing passenger service. This scheme stops short of Nacton Village and in doing so, removes the potential for impacts on the Scheduled Ancient Monuments in that area.

2.32 The preferred option, which was selected based on both the TAG assessment and the SAP team modelling, was the fourth. This option provides for the predicted increased rail traffic movements to the Port of Felixstowe up to the year 2023. Essentially the scheme doubles the current capacity of the Branch Line as the additional track allows pairs of freight services to be flighted. The additional track is then used as a reception line to the port enabling freight trains inbound to the port to be held clear of both the passenger service and outgoing freight trains.

***Ipswich Yard***

2.33 A number of potential options for the scheme in Ipswich Yard were initially rejected because of their inability to deliver sidings of an appropriate length to render the scheme operable. This left three viable options which were subject to further appraisal.

2.34 The first option was the creation of new siding lengths of 531 m, 522 m and 492 m with five original sidings retained and sidings extended along the lower

yard access route. The access to the lower yard would be retained but access to London would be severed. Some works to trackside and central interlocking signalling equipment, control centre, OLE gantries, flood light gantries and drainage outfall for lower yard access would be required.

2.35 The second option required the creation of new siding lengths of 531 m, 530 m and 469 m with five original sidings retained and sidings extended along the lower yard access route. There would be no gradient on the lower yard access route as access would be severed. Access to London would be retained and some works to trackside and central interlocking signalling equipment, control centre, OLE gantries and flood light gantries would be required.

2.36 The third option looked at the creation of new sidings with lengths of 558 m, 527 m and 532 m, with three original sidings retained. The creation of longer sidings would require the acquisition of residential gardens. The existing gradients on the lower yard access route sloping to Ranelagh Road would be retained (remains 68m in length) as would the access to the lower yard and London.

2.37 The preferred option taken forward was the second option. This was primarily as a result of the fact that the first option severs access to London and the third option is not suitable due to predicted visual impacts and the acquisition of private land.

2.38 Further detailed work undertaken by the scheme's design engineers to take forward a preferred single option for Ipswich Yard is described in Richard Spoors's proof of evidence (App/21).

*WESTERFIELD*

2.39 The proposals assessed in the ES comprised upgrading Westerfield level crossing on the B1077 from Automatic Half Barrier to Full Automatic Barrier with CCTV and provision for construction of a pedestrian footbridge. However, subsequent to the application for the Order, Network Rail have confirmed that there is no safety requirement for a footbridge at Westerfield. A copy of a letter from Network Rail to this effect is contained in my Appendix SP1.

2.40 Therefore, the footbridge was removed from the scheme and an Addendum to the ES submitted. This identified, amongst other things, the changes to the ES that resulted from the removal of the requirement for the pedestrian footbridge, and set out the residual impacts arising from the amended scheme. I have described these in Section 7 of my proof of evidence.

*IPSWICH FUEL POINT*

2.41 The ES for the Order application did not include any analysis in relation to the area known as the Ipswich Fuel Point. Nor, following distribution of the Scoping Report for the scheme (CD/86) to a wide range of consultees, were any issues in relation to the fuel point raised by third parties.

2.42 The fuel point comprises a collection of railway sidings, a refuelling area (two pumps) and an inspection pit, immediately to the south of Ipswich Station. Locomotives are known to remain in the sidings with their engines running before re-joining the Felixstowe branch line.

2.43 The facility is operated independently by Freightliner, one of the major freight operating companies (FOC).

2.44 Potential impacts in relation to the fuel point were scoped out of the ES for the scheme for a number of reasons, which I set out in the following paragraphs.

2.45 The fuel point is physically remote from the scheme. It is a network facility, operated by a FOC rather than by HPUK or the Port of Felixstowe.

2.46 Furthermore, any impacts that arise from the use of the fuel point by locomotives exist at present and ceteris paribus will continue to exist into the future.

2.47 Nevertheless, HPUK have revisited the issue of potential impacts from trains at this facility. The way in which they are responding is outlined in the proofs of evidence presented by Bernard Postlethwaite (App/81) and John Drabble (App/101).

## 3 ANTICIPATED BENEFITS OF THE SCHEME

### ACCORDANCE WITH GOVERNMENT POLICY

3.1 At all levels of government policy there is support for shifting freight from road onto the rail network. This policy context is set out in detail in Chapter 3 of the ES for the branch line scheme (CD/5). Ian Gilder, in his proof of evidence (App/41), describes further how the scheme accords with policies at national, regional and local levels.

3.2 As well as being in accordance with government aims to increase rail freight in general terms, the branch line scheme will also fulfil an important function in helping to cater for organic growth at the Port of Felixstowe.

### RELATIONSHIP WITH THE FELIXSTOWE SOUTH RECONFIGURATION

3.3 It was demonstrated at the public inquiry into the Felixstowe South Reconfiguration that substantial economic advantages will accrue to the country from that scheme. Significant benefits for regeneration and the redistribution of economic activity are expected, and the Reconfiguration is forecast to create some 1,480 jobs in the Haven Gateway.

3.4 Both the proposals for the Reconfiguration and the Port of Felixstowe's forecast organic growth, which performs a vital role in serving the country's economy, led to the branch line scheme being required. This in turn fits in with Government policy to increase the share of freight transport via rail, as I have described above.

3.5 One of the key needs for the scheme is to unlock the benefits that will accrue from the Reconfiguration. It has been demonstrated that rail capacity to the Port of Felixstowe requires enhancement. Therefore, the scheme can be seen

to both support and enhance the benefits predicted to occur as a result of the Reconfiguration.

3.6 The Inspector at the Reconfiguration public inquiry noted (CD/9) that, in relation to the rail mode share targets for the Reconfiguration, "*failure to meet these targets could eventually lead to substantial increases in congestion on the road system, and would be harmful in terms of sustainability objectives*" (paragraph 8.238).

3.7 The Inspector went on to note that, "*the promoters, SRA, the District Council and the County Council agree that improvement works to the Felixstowe Branch Line and Ipswich Yard would be needed by 2008…..assuming a 25% rail mode share of inland containers from all Haven terminals*" (paragraph 8.239).

## 4 ENVIRONMENTAL IMPACTS AND THEIR MITIGATION

### *OVERVIEW OF IMPACTS*

4.1 There are very few adverse environmental consequences predicted to occur as a result of the implementation of the branch line scheme. Where these have been forecast in ES, I will describe them in this section, together with the mitigation to which HPUK is committed in order to reduce the magnitude or significance of potential environmental impacts.

4.2 I will also describe impacts that are predicted to occur as a result of the revised scheme and which are addressed in the Addendum (see also Section 7 of my proof of evidence for a more detailed description).

4.3 I have set out in my Appendix SP2 all the potentially significant environmental impacts that are predicted to arise from the scheme, together with the committed mitigation measures and how these are to be delivered in practice. Where reference is made in that appendix to either planning conditions or the Code of Construction Practice (CoCP), more detail can be found in the proof of evidence prepared by Ian Gilder (App/41, with the CoCP itself contained in Appendix IMG5 of App/43). I have used the same numbering to apply to any conditions that has been used by Ian Gilder.

4.4 The table in Appendix SP2 is based on material originally set out in the ES (and the Addendum), but updated as appropriate in respect of delivery of mitigation following discussions with Suffolk Coastal District Council. Again, further detail can be found in Ian Gilder's proof of evidence (App/41).

4.5 Where appropriate I have confirmed my summary of the predicted environmental impacts with the environmental specialist who was responsible for that particular discipline at the time of preparation of the ES.

4.6 As I have noted in Section 1, above, noise and air quality matters are dealt with in detail by Bernard Postlethwaite (App/81) and John Drabble (App/101), respectively.

***LANDSCAPE AND VISUAL IMPACTS***

4.7 Throughout the scheme a high standard of design will be used for new structures, retaining walls and level crossings (Condition 3). Any reinstatement that is necessary will be undertaken in a sensitive manner, and materials and finishes will respect the surrounding townscape and landscape (Condition 3). A detailed landscape design for the works will be prepared and agreed with the local authorities during detailed design (Condition 5). Tree and shrub replacement planting will follow the completion of the works (Condition 8).

4.8 As a result of this mitigation, I do not consider that long term significant visual impacts from the scheme will persist.

4.9 Bernard Postlethwaite will make reference in his proof of evidence (App/81) to a proposed noise barrier within Ipswich Yard for residents along Ranelagh Road. I would note that this will be of transparent acrylic construction to minimise visual intrusion and to reduce shading of the gardens in the area. Its design will be subject to approval by the local planning authority (Condition 3) and it shall be installed no later than six months after commencement of works at Ipswich Yard (Condition 22).

4.10 During construction, the implementation of mitigation through worksite management outlined in the CoCP will ensure that impacts are minimised (Condition 20). The CoCP is described in Ian Gilder's proof of evidence (App/41).

*ECOLOGY*

4.11 The detailed design of the scheme will be undertaken in such a way as to minimise the loss of habitats. This issue is covered in Ian Gilder's proof of evidence (App/41). Vegetation will be reinstated wherever practical following completion of the construction works (Condition 19).

4.12 The location of notable species will be identified and marked and protective fencing installed to prevent disturbance, where possible, as described in the CoCP (Condition 20). With these measures in place, no significant residual impacts are predicted.

4.13 A number of further measures will be put in place as part of the CoCP, for the mitigation of impacts during construction (Condition 20). These will include: the timing of works to avoid the over-wintering period for wild fowl; the replacement of an equivalent number of trees to those lost from construction; minimising working areas; protection of trees; translocation of reptiles to a suitable receptor site; reptile proof fencing; obtaining a Defra Licence for bat protection where required; and the employment of an ecologist to advise during construction.

4.14 With these measures in place, no residual adverse impacts during construction are anticipated.

*WATER RESOURCES*

4.15 Drainage of the new track will be provided in accordance with Network Rail Standards, using materials that encourage attenuation of oils and pollutants. No significant adverse impacts are predicted on drainage patterns.

4.16 An appropriate drainage system and subsequent maintenance will be provided at Ipswich Yard (Condition 15). Pollution prevention and control and emergency response measures will be developed for the scheme during detailed design in accordance with the Environment Agency's various Pollution Prevention Guidelines (PPG) and standard Network Rail procedures (Condition 15).

4.17 With the implementation of these measures no significant adverse impacts are predicted.

4.18 In the short term, any potential impacts on water resources due to excavation of earthworks will be mitigated by the prevention of sedimentation and contamination in accordance with PPG 5: Works in, near or liable to affect watercourses (CD/87) and PPG 6: Working at construction and demolition sites (CD/88).

4.19 Consultation with appropriate third parties will ensure that the location of any pipes potentially affected will be identified and avoided or protected.

4.20 The risk of contamination from spills and disturbance of contaminated ballast or formation materials will be minimised by utilising dedicated areas for fuel and oil delivery, storage, transfer and refuelling and also by using conventional best practice rail industry techniques (Condition 14).

### *CONTAMINATED LAND*

4.21 A detailed site investigation will be carried out to identify any contaminated land present from previous activities. Where this reveals the presence of contaminated land, a Land Assessment Report and Management Plan will be prepared to identify necessary remediation measures to render the land fit for intended purpose (Condition 14).

4.22 This, coupled with compliance with the CoCP (Condition 20) will ensure that there will be no significant impacts.

### *OTHER ENVIRONMENTAL TOPICS*

#### *Overview*

4.23 Although not specifically requested by the Secretary of State for Transport, I set out below some further information about environmental topics that are addressed in the ES.

#### *Archaeology*

4.24 An archaeological scheme of investigation will be prepared in consultation with Suffolk County Archaeology Service and appropriate arrangements will be made to preserve finds and to record and publish results of excavations. With this mitigation in place, there will be no significant adverse impacts on archaeological resources.

#### *Traffic and Transport*

4.25 I describe the operational effects of the branch line scheme on traffic movements in Section 5 of my proof of evidence.

4.26 The ES describes (CD/5, paragraph 4.8.40) that a significant impact would be expected to arise in respect of the closure of Croft foot crossing. In practice, any such impacts are unlikely to arise as existing users of this route are extremely low, and use of the footpath can pose a danger to pedestrians. This issue is addressed further by Andrew Cann in his proof of evidence (App/121).

4.27 The suspension of passenger services to Felixstowe during track possession for construction will be mitigated through the provision of replacement bus services.

4.28 The proposed temporary closures of Public Rights of Way will be mitigated through the provision of diversion routes and no significant impacts are expected to arise. This issue is covered by Richard Spoors in his proof of evidence (App/21).

***ENVIRONMENTAL APPRAISAL WORK UNDERTAKEN FOR NETWORK RAIL***

4.29 In addition to the detailed EIA work that was presented in the ES for the scheme and the Addendum, an Environmental Appraisal (EA) was undertaken by ERM on behalf of Network Rail (CD/89). This was necessary to accord with Network Rail's GRIP Stage 3 process (1) .

4.30 The aim of the EA is to identify and evaluate the environmental components that will be affected, or will affect, the project in order that actions can be taken, where necessary, to:

1. avoid or reduce the impact of the project on the environment during the design process;

(1) This is the Guide to Railway Investment Projects, as also refereed to by Richard Spoors in his proof of evidence (App/21). It is a formal procedure through which every investment project on Network Rail's railway must pass. Stage 3 represents the "Options Selection" stage. This is followed by Stage 4, Single Option Development.

2. collect additional environmental information to make a more informed decision on the project components;
3. initiate the environmental legislative and consent process; and
4. commence appropriate consultation and communication with external parties.

4.31 The purpose of the EA was to identify potential environmental issues and risks that may potentially arise during the design and construction of the project and to ensure that appropriate actions and/or measures are undertaken as part of the project planning process to manage these aspects.

4.32 The EA identified environmental issues and risks which were used to determine the significance of risk to the project. These risk aspects were carried forward into a Project Environment Strategy (PES), also prepared by ERM (CD/90). The purpose of the PES was to ensure that adequate attention and direction is given to the responsible parties (ie project team, design consultants, contractors) for implementation and management of the issues.

4.33 The environmental issues and risks that were included in the PES comprise: contaminated land at Ipswich Yard; visual impacts on line side residents; noise and vibration during construction (in particular night time and weekend working) and operation; traffic disruption on local roads due to operation of the scheme; footpath, road closures/diversions; and discharge of foul water from Ipswich Yard.

4.34 The strategy to manage these individual key risks, and others as appropriate, is included in the PES.

4.35 The EA has been signed off and agreed by Network Rail.

## 5 OPERATIONAL EFFECTS ON ROAD TRAFFIC

### *LEVEL CROSSINGS*

5.1 The branch line scheme facilitates an increase in rail traffic arising from the Felixstowe South Reconfiguration and organic growth at the port. This increase in traffic will necessitate a change in the signalling arrangements on the branch line, which control the length of the down time of level crossing barriers.

5.2 There are a number of level crossings on the section of branch line contained in the Order application that are used by road traffic. These are situated at Westerfield, Levington, Morston Hall, Thorpe Lane and Trimley. Details of each of these level crossings, and signalling arrangements, are given in Richard Spoors's proof of evidence (App/21).

5.3 It is likely that some barriers at these crossings will be required to be in the down position for a longer period of time as a result of the scheme, with some consequent longer queuing times for road vehicles.

### *VOLUMES OF ROAD TRAFFIC*

5.4 During the preparation of the ES for the scheme, traffic flows were counted at each of the relevant vehicular level crossings. With the exception of Westerfield, the flow at each location was low. Subsequent to the Order application further, more comprehensive, traffic counts were carried out, which confirmed the original findings. These latter counts were generally undertaken over nine-day periods in January 2006. The results are summarised in my Appendix SP3.

5.5 As I have described, of the five locations Westerfield has the highest traffic flow. This location was, therefore, selected to represent the worst case traffic flow impacts arising from barrier downtimes.

***BARRIER DOWNTIMES***

5.6 All the level crossings noted above have barrier down times of varying lengths. As noted, these affect only a limited number of road vehicles.

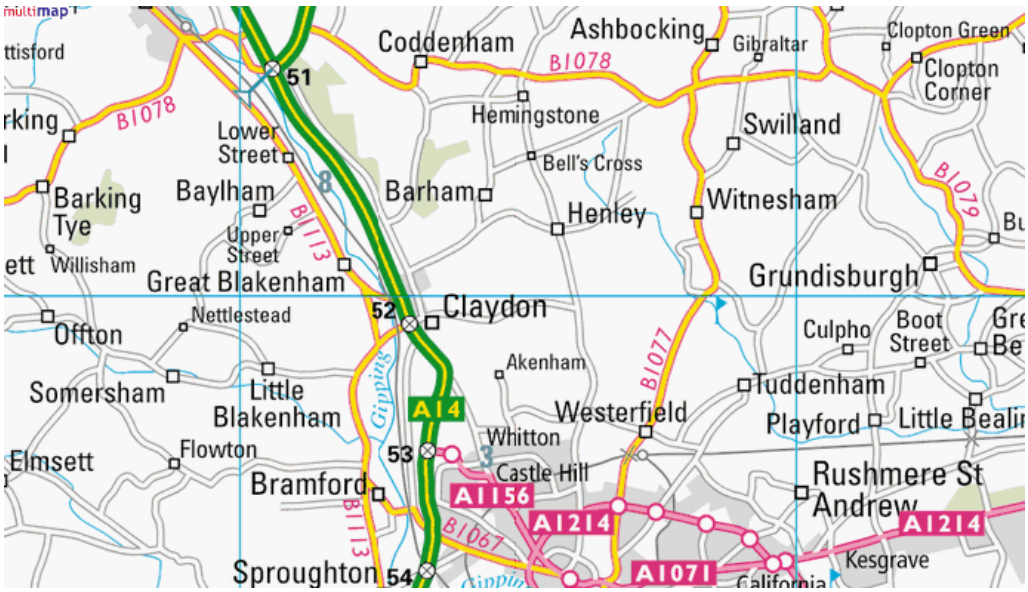
5.7 At Westerfield, currently, the longest individual barrier downtime is 5 minutes and 54 seconds. During this downtime, a queue of 27 vehicles would typically form, based on the surveyed traffic flows. With the dualled Felixstowe Branch Line in operation, it is expected that the longest period of downtime will occur between 0800 and 0900 hours for a duration of 7 minutes and 30 seconds.

5.8 Assuming, as a worst case, that the busiest quarter hour of surveyed traffic movements occurred when the barrier is down, a queue of 38 vehicles on each side of the crossing could potentially occur. In terms of queuing distances I do not consider an increase from 27 vehicles to 38 vehicles to be a material impact.

5.9 Although alternative routes clearly exist for vehicles to avoid the potential wait at the level crossing, I would not consider these to represent practical options that the motorist would typically choose to take. Furthermore, these routes would in themselves introduce delays as a result of the extra distance travelled.

5.10 Should drivers of vehicles wish to avoid the level crossing at Westerfield, they can potentially divert towards Henley to the west or Tuddenham to the east,

both of which have overbridges to take road traffic over the railway. This is illustrated in the map below.




5.11 Westerfield is likely to experience the greatest increase in barrier downtime over the course of an hour. Currently, the longest downtime over the course of an hour is 13 minutes and 15 seconds, as described in Appendix SP3. The largest increases over existing down time will occur between 0800 and 0900 hours and between 1700 and 1800 hours, each hourly period being subject to a potential total downtime of 21 minutes (1) .

5.12 For the majority of the day, barrier downtimes will be considerably less than this, and drivers will not experience significant delays.

*ACCESS FOR EMERGENCY SERVICES AT CORDY'S LANE*

5.13 In general, I am not aware of any difficulties concerning about the ability of emergency vehicles to access locations along the branch line via level crossings. Some concerns have, however, been expressed by residents over the ability of emergency vehicles to get into or out of Cordy's Lane with the barrier down at Trimley (see also Section 8).

(1) consisting of five periods of downtime and seven periods of downtime, respectively

5.14 In order to resolve this situation, HPUK has initiated consultation with the emergency services. Emergency services requiring to cross the crossing to get into and out of Cordy's Lane currently do so in accordance with standard practice that exists between Network Rail and the emergency services.

5.15 This enables the emergency services co-ordinator to contact the signaller in advance in order to stop the trains. As a back up, the emergency service drivers and/or residents can also contact the signaller using the number advertised at the signs placed at the crossing.

5.16 There are two such signs at Trimley, one on either side of the railway. These have been fitted by Network Rail, and as noted allow the signaller to stop the trains when necessary.

5.17 The ES notes (CD/5, paragraph 4.8.13) that there is a telephone connection on the northern side of the crossing at Trimley with the signaller at Colchester. Although this is not for public use, mobile phones are in extremely common usage by members of the public, and emergency service drivers will also be equipped with both mobile telephones and radio contact.

5.18 As a result of consultation, the Fire and Rescue Service, Suffolk Constabulary and East Anglian Ambulance NHS Trust have all stated that they have no objection to the proposed scheme with regard to the Trimley crossing. Copies of letters to this effect can be found in Appendix 4 in the appendices to Andrew Cann's proof of evidence (App/123).

5.19 I understand that Network Rail are not aware of any similar concerns at any other location on the branch line.

## *6 ADEQUACY OF THE ENVIRONMENTAL STATEMENT*

6.1 The procedures for Transport and Works Order applications are described in the Transport and Works (Applications and Objections Procedure) (England and Wales) Rules 2000 ("the Applications Rules") (CD/28).

6.2 The Applications Rules require that an application for an Order must be accompanied by an ES if that project is a type that falls within Annex 1 of the Environmental Impact Assessment Directive ("the Directive"), or for a project which falls within Annex 2 of the Directive ("Annex 2") and is expected to give rise to significant environmental effects.

6.3 In respect of Annex 2 schemes, the Directive provides that EIA is required where the construction of the railway exceeds an area of works of 1 hectare, and is likely to have significant effects upon the environment, or if the railway is to be used for long distance railway traffic. The branch line scheme falls into this category of project.

6.4 In embarking upon the EIA for the branch line scheme, I ensured that the ES conformed fully with the requirements of the Applications Rules, particularly in respect of Schedule 1, which is reproduced in my Appendix SP4.

6.5 I am confident that the ES meets in full all the necessary requirements for such documents, and I note that no objections have been raised specifically in regard to the overall adequacy of the ES against the legislative requirements. In three cases objectors have made reference to the contents of the ES, and I deal with these in Section 8 of my proof of evidence.

## 7 *ENVIRONMENTAL EFFECTS OF THE REVISED ORDER*

### *THE ADDENDUM TO THE ENVIRONMENTAL STATEMENT*

7.1 The Addendum (CD/8) was prepared to supplement the information in the ES, in order to aid the Secretary of State's decision as to whether to make the TWA Order with respect to the scheme.

7.2 The Addendum included an assessment of the potential effects of the revisions to the scheme, principally comprising the removal of the pedestrian footbridge at Westerfield and revisions to the Rights of Way in the vicinity of the scheme.

7.3 In this section I deal with the environmental impacts arising from the revised situation at Westerfield, that is with removal from the scheme of the footbridge that was originally proposed. Issues associated with Rights of Way are dealt with in the proof of evidence prepared by Andrew Cann (App/121).

7.4 As I describe in Section 5 of my proof of evidence, additional traffic data were collected and reported upon in the Addendum.

7.5 The technical scope of the Addendum commenced with an appraisal of whether the conclusions in the ES remained unaltered and would, therefore, remain applicable to the Addendum. It was concluded that the removal of Westerfield footbridge from the application did not alter the conclusions presented in the ES in respect of planning, ecology, water resources or contaminated land.

7.6 I set out below the permanent and temporary impacts arising from the decision to remove Westerfield footbridge from the scheme. The methods,

significance criteria and assumptions used in the EIA of the revised scheme are the same as those that were used and reported in the ES.

7.7 The impacts of the removal of the proposed footbridge at Westerfield on noise and air quality are dealt with in Bernard Postlethwaite's (App/81) and John Drabble's (App/101) proofs of evidence, respectively.

***LONG-TERM AND PERMANENT IMPACTS AT WESTERFIELD***

7.8 No residual impacts are predicted to arise in respect of archaeology and cultural heritage. This represents an improvement on the situation described in the ES, where potential adverse impacts to archaeology were predicted, although minimised through mitigation.

7.9 The ES had also predicted permanent residual landscape and visual impacts from the footbridge at Westerfield. The removal of the bridge from the scheme results in no significant adverse impacts arising, and as such the situation is improved.

7.10 The provision of the pedestrian footbridge was considered to constitute a positive impact on pedestrians. With no footbridge available pedestrians will have to wait for the barriers to be lifted. The increase in downtime will cause an increase in journey time for pedestrians waiting to continue their journey across the crossing.

7.11 This is a worsening of the situation described in the ES, and the Addendum states (at paragraph 2.5.11) that this would be expected to give rise to a significant impact. However, there are only very low numbers of pedestrians using this crossing, and as a result I do not consider that significant impacts will arise in reality. In addition, a full barrier is proposed at Westerfield,

which will provide a considerably safer crossing environment for pedestrians, thus improving the situation for pedestrians overall.

7.12 There will be a reduced level of land take as a result of the revised scheme. This affects private gardens on the north side of the crossing, and provides an improved situation over that predicted in the ES.

7.13 The Addendum notes (at paragraph 2.1.5) that this may constitute a significant adverse impact for the owners of this land. However, the landtake is extremely small (in the order of 4 $m^2$) and financial compensation will be provided through the Compensation Code. I therefore consider this impact to be acceptable in the context of the scheme as a whole.

***TEMPORARY IMPACTS***

7.14 No significant temporary adverse impacts are predicted to arise as a result of the changes to the scheme identified in the Addendum.

***WAITING TIME FOR DRIVERS AT WESTERFIELD***

7.15 As predicted in the ES, the increase in aggregated level crossing barrier downtime will result in an increased likelihood of drivers arriving at Westerfield when the barrier is down, and therefore being caused to wait.

7.16 My assessment of the impact that this will have on vehicles is described in paragraphs 5.6 to 5.12 of my proof of evidence.

## 8 RESPONSES TO OBJECTIONS

### *OVERVIEW*

8.1 In this section I describe the objections that have been received in respect of the issues that I cover in my proof of evidence, and set out my responses. I have grouped the objections according to the section of my proof of evidence to which they relate.

### *SCHEME ALTERNATIVES*

8.2 RF and JA Woodcraft (OBJ/13) object to the statement in the non-technical summary of the ES (CD/6) that "*no other reasonable alternatives have been identified at Westerfield level crossing*" (para 2.5.7). A great deal of consideration has been given to the design of the scheme at Westerfield, and as a result the proposed footbridge has been removed from the scheme.

8.3 The Woodcrafts make reference to the possibility of building a relief road, passing under the railway in tunnel. I would consider this to be a disproportionate response, bringing its own environmental impacts that would need to be assessed. It would also be, in my view, a very extensive additional piece of infrastructure that would not be required given the level of impacts to road traffic expected at Westerfield.

8.4 No other objections have been raised specifically in respect of scheme alternatives.

### *ENVIRONMENTAL IMPACTS AND THEIR MITIGATION*

8.5 Ian Cowan (OBJ/15) avers that "*a number of areas of agricultural and greenfield land will be required for a variety of purposes*" during the construction phase of

the scheme. He further notes that such areas are adjacent to a variety of uses, including an Area of Outstanding Natural Beauty and large number of homes, and suggests these places will be affected by heavy lorries, noise and dust from plant and other disturbance.

8.6 I have described in Section 5 how potential impacts during the construction phase will be mitigated, with very few residual, adverse effects. Further detail on proposed conditions and the Code of Construction Practice (CoCP), both of which detail with potential construction impacts, can be found in Ian Gilder's proof of evidence (App/41)

8.7 The Environment Agency (OBJ/40) has stated that it "*is not clear that the Applicants have yet adequately assessed the potential level of contamination at Ipswich Yard, and the Agency is likely to require the Applicant to carry out further investigation and put in place appropriate remediation plans*". HPUK states clearly at Table 7.1 of the ES for the scheme (CD/5) that a detailed site investigation for identification of the presence of contaminants will be carried out, and that where appropriate a Land Assessment Report and Management Plan shall be prepared to render land fit for the intended purpose. This mitigation will be delivered by means of the CoCP and planning condition.

8.8 The Environment Agency have also stated that it "*is concerned that the proposed Order does not provide adequate protection for watercourses*". The CoCP provides a range of measures to protect watercourses, as described by Ian Gilder in his proof of evidence (App/41).

8.9 Ivan Charity (OBJ/44) suggests that there are "*no mitigation measures proposed in relation to the following…..detrimental effects which affect my property, and are as listed in the EIA*". He notes one or two concerns he has in relation to noise and glazing, which are addressed by Bernard Postlethwaite in his proof of

evidence (App/81). He then highlights "*Visual impact from the removal of the large number of existing trees from within the railway line boundaries, 4.2.42*".

8.10 I believe Mr Charity's reference paragraph relates to paragraph 4.2.42 of the Non-technical Summary of the ES (CD/6). This states, "*The loss of landscape resources will arise predominantly through woodland clearance to accommodate the new track*". However, it goes on to outline mitigation, stating that, "*Replacement woodland planting will help to minimise impacts*".

***OPERATIONAL EFFECTS ON ROAD TRAFFIC***

8.11 A number of objectors have made reference to increased barrier downtimes potentially arising from the scheme, although some of these have also taken the opportunity to declare their support, in general terms, for the introduction of improved rail freight facilities.

8.12 Rosemary and Eric Gitsham (OBJ/8) contend that the calculations that HPUK have undertaken with respect to barrier down times are based on only a single 24 hour survey. As I describe above, surveys have more recently been undertaken over nine-day periods. They also question whether forecasts of future down times take into account the likelihood of freight trains being longer in the future; I can confirm that all assessment work undertaken in connection with the branch line has assumed longer trains in the future.

8.13 Mrs HS Unwin (OBJ/11) asserts that the increase in the number of trains will cause prolonged waiting times at the level crossing in Cordy's Lane/Station Road. I have described above that, by and large, few vehicles will be affected by increased down times.

8.14 Mr and Mrs DA Parkes (OBJ/16) are concerned that longer downtimes will result in road traffic standing outside their property "*for much longer periods of*

*time along with noise and disturbance from the crossing sirens and flashing lights*".

Mr and Mrs Parkes live very close to the Morston Hall crossing which already has downtimes to allow for passing trains, with consequent queuing traffic and flashing lights. Noise issues are dealt with by Bernard Postlethwaite in his proof of evidence (App/81).

8.15 Robert and Caroline Nice (OBJ/20) raise a number of detailed concerns with respect to the forecast increase in down times at Trimley. Some of these concerns relate to their perception of existing Network Rail practices concerning signalling etc, which I am unable to comment on. They also comment on the lack of adequate telephone facilities and state that there are no signs displaying contact telephone numbers. As I have described, there are signs in place at this crossing advertising a telephone number to call, as illustrated below.


8.16 Mr and Mrs Nice further state that travelling times will be increased for local residents due to the forecast increase in barrier down times. It is the case that some people will experience delays; however, this will affect relatively few

people and I believe this needs to be weighed against the significant transport benefits that will accrue from the introduction of the branch line scheme.

8.17 They are also concerned about the ability of the emergency services to reach an accident in the event of the barriers being down. I have described in Section 5, above, that the Fire and Rescue Service, Suffolk Constabulary and East Anglian Ambulance NHS Trust have all stated that they have no objection to the proposed scheme with regard to the Trimley crossing.

8.18 Martin Barker (OBJ/45) states that increasing the barrier downtimes at Trimley is unreasonable. As I have described above, the increase in downtime affects only low levels of traffic and is not anticipated to be significant.

8.19 Mr N Smith (OBJ/23) raises a particular concern with respect to the potential increased down time at the Thorpe Lane level crossing. Mr Smith owns a farm to the south of the crossing. He estimates that, in the summer, his farm staff generate "*up to 200 vehicle movements per day on the crossing*". This concern is reflected in the objection from Trimley St Martin Parish Council (OBJ/31).

8.20 I understand that, on behalf of HPUK, Suffolk County Council have undertaken further traffic counts at Thorpe Lane level crossing which demonstrate that, during the period of the year to which Mr Smith refers, there is no significant increase in vehicle movements at the crossing. Further detail on this issue can be found in Andrew Cann's proof of evidence (App/121), particularly his Appendix 9 (App/123).

8.21 David King (OBJ/43) questions how long the barriers at Thorpe Lane will be down each day. I have described in Section 5 that some barriers are likely to be in the down position for a longer period of time as a result of the scheme, with some consequent longer queuing times for road vehicles.

8.22 Westerfield Parish Council (OBJ/25) believe that, with respect to the Westerfield level crossing, a traffic model should be developed that will "*demonstrate queue lengths, queue clearance times and on the release of queuing traffic, the ability of the next junction to the south at Valley Road to cope with these surge flows*". They are also concerned about existing conditions on local roads.

8.23 I understand that representatives of HPUK have been in correspondence with members of the Westerfield Parish Council to discuss the Parish Council's concerns and to take matters forward.

8.24 Christine Mann (OBJ/30) notes that her concerns include "*disruption of extra closed barriers*", although gives no further details. I have described above that, in general terms, such closures affect relatively few vehicles.

***ADEQUACY OF THE ENVIRONMENTAL STATEMENT***

8.25 In addition to its comments that I have noted above, at paragraphs 8.7 and 8.8, the Environment Agency (OBJ/40) states, "*so far as the Environmental Statement…..is concerned, the Agency is still considering this and, pending further review, remains to be satisfied as to its contents*". The Agency then goes on to expand on this point, which I have addressed in my earlier response.

8.26 However, the Agency also points out that it "*would hope that it would be possible to resolve its concerns by negotiations with the Applicants for the Order…..*". I understand that discussions are being progressed between the Agency and the Applicant's solicitors to ensure that this is the case.

8.27 Ipswich Borough Council (OBJ/53) expresses concerns about the potential for additional noise at the Ipswich fuel point, arising from the scheme. The Council is also concerned about fumes emitted by locomotives at that facility. They state that, "*no consideration has been given [in the Environmental Impact*

*Assessment] to the further impact of keeping additional locomotives at the Ipswich Fuel Point…..This is a surprising omission given that the impact of a freight locomotive stored at the Fuel Point is likely to have a longer and greater impact on surrounding properties*". This concern is mirrored in the objection made by Ramsey Park Residents Association (OBJ/55).

8.28 As I have pointed out in Section 2 of my proof of evidence (paragraph 2.41, et seq), the fuel point is operated independently by Freighliner and is a network facility that would be operated in spite of the branch line scheme. Any environmental problems that may be associated with the facility will exist regardless of the scheme.

8.29 However, as I also point out in Section 2, HPUK have revisited this issue, and both Bernard Postlethwaite (App/81) and John Drabble (App/101) address the issues of noise and air quality, respectively, in their proofs of evidence.

## *9 OVERALL CONCLUSIONS*

9.1 The EIA for the proposed Felixstowe Branch Line and Ipswich Yard Improvement scheme was carried out for both the operational and construction phases of the development. As requested by the Secretary of State for Transport in his Statement of Matters, I have demonstrated in my proof of evidence that the scheme underwent a thorough EIA and that the ES is robust and fully conforms to the requirements of the Applications Rules (*point 10 in the Statement of Matters*).

9.2 The process included an examination of the alternatives to the scheme at a strategic level by the Joint Study Group and Network Rail (*point 3 in the Statement of Matters*). Additionally an appraisal of the alternatives to the scheme at a scheme specific level was undertaken according to the Government's TAG methodology.

9.3 The ES and its Addendum report that there are very few environmental impacts arising from the construction and operation of the scheme that cannot be mitigated (*points 5 (b) and (c), 8 and 13 in the Statement of Matters*). Of those few impacts remaining following the implementation of mitigation, most are minor or negligible.

9.4 The same can be said to be true with respect potential impacts on road traffic (*point 6(b) in the Statement of Matters*).

9.5 Overall the scheme will provide substantial advantages through unlocking the benefits of the Felixstowe South Reconfiguration, catering for organic growth at the Port of Felixstowe and helping to deliver the Government's policy to increase the movement of freight by rail (*point 4 in the Statement of Matters*)