

Lower Thames Crossing

9.54 Comments on LIRs
Appendix B – Dartford
Borough Council

Infrastructure Planning (Examination Procedure) 2010

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1 Applicant's Responses to Dartford Borough Council's Local Impact Report

Table 1.1 The Applicant's responses to Dartford Borough Council's Local Impact Report (LIR) – [REP1-223]

LIR Reference	Local Impact Report Extract / Applicant's Response
Pages 7-9 Paragraphs 4.4 to 4.8	4.4 The economy of the Borough is directly linked to and significantly depends on its transport connections. For example, Transport and Storage is now the second largest (of sixteen) employment sectors in Dartford, after a 73% increase in local jobs (2015 to 2021). It accounts for 14.5% of local employment, substantially higher than the England average of 5.2% ¹ .
	4.5 The A282 / M25 Dartford Crossing and the arterial A2 London-Dover routes generate high volumes of traffic flow through the Borough. This can be attributed to the principal cause of the Borough's higher carbon emissions per capita than the regional average, given that the majority of emissions are from transport sources.
	4.6 It is demonstrable in Figure 4 shown on the following page that parts of the Borough traversed by these strategic routes, and main feeder roads, suffer very high levels of air pollution (when measured in terms of NO2 estimated annual mean 2022).
	4.7 It also worth noting that due to the strategic road network operating above capacity, even small incidences on this strategic network can result in extensive congestion on local roads. It is this queuing of vehicles that has an impact on air quality on the local roads and is demonstrated by the fact that Dartford town centre has been designated as an Air Quality Management Area. Queueing in this area only arises to severe levels when there is an incident on the wider strategic network, largely resulting from diverting traffic.
	4.8 The M25/A282 is a high capacity strategic road, which bisects the Borough. Unusually it also bisects directly the urban hinterland of Dartford Town Centre causing barriers to movement between the local communities within the Borough; and critically funnelling these local movements onto a limited number of east west routes, two of these routes traversing junctions 1A and 1B on the M25/A282. The congestion that results on the local road network and these junctions also impacts therefore on local movements, not only commercial and private vehicles but also buses serving the local area, (including the Fastrack bus rapid transit service). The diversion of vehicles from the strategic network and the consequent queuing on local roads also creates a poor quality environment for cycling and walking - as demonstrated through Dartford's Local Cycling and Walking Infrastructure Plan 2023² findings - discouraging take up of these modes in the Borough. The Council through its Local Plan and Infrastructure Deliver Plan is working hard to promote active travel in order to reduce private car use in the urban area however, the quality of such routes is impacted on directly by the use of junctions 1A and 1B being over-capacity. As well as the congestion on the local road network resulting from the lack of resilience of the Dartford Crossing. The challenges faced at these two key junctions are demonstrated in Figures 5 to 8 with below.

LIR Reference	Local Impact Report Extract / Applicant's Response
Applicant's Response	The Applicant acknowledges the comments made in the Local Impact Report (LIR) from Dartford Borough Council above regarding employment, carbon emissions, air quality and traffic.
Pages 11-13 Paragraphs 4.9 to 4.16	4.9 Dartford's new Local Plan is expected to be adopted later this year (2023). Submitted in December 2021, Examination hearing sessions have been completed at Stage 1 (Legal/ Duty to Cooperate compliance - June 2022), Stage 2 (Soundness – November 2022) and Gypsy/ Travellers (May 2023).
	4.10 The submitted Plan states (paragraph 1.34): "In summary, the Local Plan needs to respond to a range of key Borough social and economic factors including:
	A rapidly growing population needing new local infrastructure, particularly for health and education.
	 A sizeable labour workforce with high employment rates but a limited choice of local high order/ professional local job opportunities.
	 High levels of mobility that puts pressure on public transport and creates traffic/ congestion in the Borough contributing to pollution levels.
	 Requirements to support healthy living with the potential for greater walking and cycling, promoting clean air and access to the countryside and greenspace.
	4.11 The Plan continues at paragraphs (2.31 to 2.32):
	"The very large volumes of traffic on both the M25 and A2 and the frequent occurrence of incidents leads to many drivers (including HGVs) being either forced or choosing to use local roads to complete their journeys. The lack of resilience of the Dartford Crossing generates much of the Borough's endemic congestion issues, with serious impacts on the local road network throughout all of Dartford town and beyond.
	A range of transport planning interventions are necessary, including reducing reliance on private vehicles in new developments and improving public transport and active travel provision. As part of this, the Council will advocate the implementation of proposed highway schemes, particularly the Lower Thames Crossing (outside Dartford) and the upgrade of the A2 Bean and Ebbsfleet junctions, in a timely manner."
	4.12 The Plan's Policy S2: Infrastructure Planning Strategy (part 4) states:
	"4. Opportunities to achieve transport upgrades will be maximised. This includes promoting:
	a) New and improved rail services and replacement or enhanced train stations.
	b) New and improved Fastrack and other bus services/ routes, including addressing non-dedicated sections of Fastrack routes which are vulnerable to general traffic congestion and bus priority at junctions where possible.

LIR Reference **Local Impact Report Extract / Applicant's Response** Further highway and junction upgrades. Additional investment will be supported, dependent on further assessment by Highways England, Kent County Council, Dartford Borough Council and partners. Use of rivers for the sustainable transport of goods and passengers as part of proposals for strategic scale development." POLICY ASSESSMENT: THE LOWER THAMES CROSSING: PROPOSAL COMPLIES WITH POLICY S2. The current adopted Development Plan for Dartford Borough, including covering constituent parts of the Ebbsfleet Development Corporation's area, is made up of: The Dartford Development Policies Plan 2017 The Dartford Core Strategy 2011 Kent County Councils minerals and waste Local Plans The Stone Neighbourhood Development Plan 2022 4.14 The Core Strategy 2011 states at paragraph 3.56 "At Junction 1a of the M25, adjacent to the Dartford Crossing, the strategic nature of the route results in Highway Agency concerns that new development will exacerbate the existing high levels of congestion. In the short term, the Council is working with its partners to explore low cost traffic management schemes to ease congestion. A longer term solution is not addressed through the strategic transport programme, since this is outside the Borough's remit. The Department of Transport and Kent County Council are currently conducting studies on making better use of the Dartford Crossing and are evaluating alternative sites for a potential Lower Thames Crossing to relieve the congestion on the existing crossing and promote the regeneration of Kent Thameside. The Council supports a Lower Thames Crossing downstream of the existing Dartford Crossing in a location which will divert strategic traffic away from routes and communities in the Borough. The Council will work with its partners, including the Local Enterprise partnership, to secure a funding proposal capable of delivering a Lower Thames Crossing at the earliest opportunity." The Core Strategy includes a range of policies to promote transport and infrastructure growth to support the levels housing and commercial regeneration planned to achieve significant regeneration, including CS26 part a: "In order to ensure that adequate and appropriate infrastructure is provided in a timely way, the Council will: a) Work in partnership with public sector providers, utility companies and developers to facilitate the delivery of high quality infrastructure that is commensurate with the scale and needs of the Borough's communities." The Development Policies Plan 2017 provides policies to address the impact of developments, and recognises the 4.16 growing importance tackling environmental and health consequences of pollution, for example policy DP5 (part 1a): " Development will only be permitted where it does not result in unacceptable material impacts, individually or cumulatively, on neighbouring uses, the Borough's environment or public health. Particular consideration must be given to areas and subjects of potential sensitivity in the built and natural environment (including as highlighted on the Policies Map) and other policies, and other potential amenity/ safety factors such as: a) air and water quality, including groundwater source protection zones. ..."

LIR Reference	Local Impact Report Extract / Applicant's Response
	POLICY ASSESSMENT: THE LOWER THAMES CROSSING: PROPOSAL COMPLIES WITH POLICIES CS26 & DP4
Applicant's Response	The Applicant notes that the relief the Project is forecast to provide and the improvements to journey times on the M25 would support the delivery of Dartford Borough Council's Local Plan.
Pages 14-16 Paragraphs 5.1 to 5.12	5.1 The Dartford River Crossing and its approaches is a critical part of the national transport network. It funnels all traffic through a single point, causing stress on the strategic network junctions as well as the surrounding local road network. This single point essentially performs many functions. It provides for London orbital movement on the M25; it is the only available route between the Channel Ports and the east of England; it is the only crossing point between Kent and East Anglia; and it also carries local movements between Essex and Kent – for example work trips between the employment centres on either side of the estuary, and shopping trips to Lakeside and Bluewater. In addition, it provides an alternative when the Blackwall Tunnel is closed.
	5.2 It is one of the busiest sections of the M25 – the orbital motorway designed to divert through-traffic away from London. It forms part of the Trans-European Transport network and, with the M20 and A2/M2, forms part of the Dover/Channel Tunnel road freight route to the majority of the UK.
	5.3 This important route has the third highest level of strategic road delay nationwide. Used by approximately 150,000 vehicles a day, the crossing exceeds its effective capacity on 257 days of the year. More than half of users experience significant delays, with queues on the crossing experienced for 4 hours per day, on average.
	5.4 The rate of incidents and accidents at or in the vicinity of the crossing is twice the national average for a route of this type. The high levels of demand and limited alternative opportunities for crossing the Thames mean that the crossing has very poor resilience to incidents when they do occur. Strategic traffic often diverts and backs up on the surrounding local road network, having nowhere else to go and local traffic using the strategic road network also diverts putting additional pressure on the limited alternative options for east-west movement through the Borough. This congestion and unreliability affects not only the strategic network itself but also the surrounding local road area. It is made worse by the close proximity of junctions on the A282/M25 and the A2 (T). An accident/breakdown can close off a lane or indeed a whole carriageway for several hours, with the local area gridlocked and the impacts felt across a wider area, including into London. Even when there is capacity available at the crossing itself, the overstressed surrounding network remains vulnerable to incidents. When these happen, drivers find it impossible to get to the crossing even if the crossing itself has capacity available, and have no alternatives routes to divert to.
Disposing Incorporate Colon	5.5 This causes serious problems for existing businesses and communities in Dartford, and is a significant risk factor for new investors. This last point is particularly important since the area is one of the growth points in the Thames Estuary, and is expected to contribute net growth to the national economy. Productivity would be increased by reduced journey times. However additional significant economic growth would be unlocked by the project by providing relief for the many logistics companies, businesses in general and commuters that suffer unproductive travel efforts and wasted time from delays and unpredictable journey times.

LIR Reference **Local Impact Report Extract / Applicant's Response** There are high levels of suppressed demand as a result of these conditions. Local journeys, in particular, are 5.6 suppressed with evidence demonstrating a low level of interaction between the north and south of the river. The risks to businesses in seeking growth in markets, and in sourcing supplies and labour from across the river with existing traffic conditions are unnecessarily high. This restricted connectivity stifles local business growth and restricts residents in their employment opportunities, affecting the whole of the Kent and Essex Thames-side. Local businesses are further hit by the knock-on impacts of gridlock on the local network in the frequent instances of 'extreme' congestion on the strategic network. The congestion also impacts on local bus services and the Fastrack rapid bus transit system resulting in unreliable services which discourages use of buses. The Project would not only relieve current conditions and make it easier to do business in Dartford, but also provide for the suppressed demand and open up new opportunities for growth and regeneration in the Thames Estuary. It will provide maximum economic benefit to the Borough but also several other locations in the southeast and London. The Project would provide an alternative to the existing crossing, particularly for journeys which can be made more 5.8 directly via a crossing further east, such as with the Port of Dover traffic. It would free up capacity on the existing Dartford Crossing, increase the resilience of the strategic and local road network in the area, and allow residents to plan their day to day movements with certainty and allow local businesses to function normally and plan for growth, unfettered by the costs imposed by a regularly malfunctioning road network. 5.9 Using evidence commissioned by Dartford Borough Council, and produced in conjunction with Kent County Council and National Highways, further information is available on the benefits of the proposal in the context of the planned further growth of the Borough. The Dartford Local Plan Strategic Transport Modelling was carried out in support of the Council's Local Plan submitted for Examination in December 2021. The transport modelling was carried out for scenarios with and without the Lower Thames Crossing in place and is, therefore, the latest and most appropriate transport modelling available to the Council to determine the impact of the Lower Thames Crossing. For the Dartford Local Plan Strategic Transport Modelling a Dartford Cordon of the Lower Thames Area Model 5.10 (DCLTAM) was used. Specifically National Highways supplied the supplementary consultation version in April 2020. Whilst further versions of the Lower Thames Area model have been produced over the intervening years it was not possible to utilise these without causing a significant delay to the Local Plan Examination. It should be noted that the Local Plan Strategic Transport Modelling was only carried out for the AM and PM Peak periods. In terms of assessing the impact of the Lower Thames Crossing the outputs produced in the Stage 3b Report have been used, specifically Appendices A & D which summarised the outputs for the A282/M25 and A2 Corridors. Results presented here focus on the demand flows (measured in PCU's) for both the Reference Case and Local Plan Preferred Option both with and without the Lower Thames Crossing. A summary of the quantitative outputs extracted from the Stage 3b Report is attached as Appendix 1, but headline results are noted here:

LIR Reference	Local Impact Report Extract / Applicant's Response
	In the majority of situations the presence of the Lower Thames Crossing is shown to have a beneficial impact on the junctions on the strategic road network within Dartford Borough.
	This is shown by a reduction in the total demand flows through each of the junctions of between 7.9% and 10.7% across both the AM and PM Peak periods. The exception is the A2/A2018 Junction at Dartford Heath (inside the M25 London Orbital) near Bexley London Borough, where the transport modelling shows that the Lower Thames Crossing has minimal impact on the total demand flows through this junction.
	When the demand flows on the mainline through each of the junctions is considered the results are more variable but generally there is a bigger reduction than the total demand flows. This is not unexpected as the demand flows on the mainline are less influenced by the traffic entering and exiting the strategic road network at each junction.
	5.12 The Dartford Local Plan Strategic Transport Modelling and demonstrated reductions in the total demand flows (7.9% to 10.7%) across peak periods, confirms substantial net traffic benefits of the Project to Dartford Borough.
Applicant's Response	Traffic flows are forecast to reduce at the Dartford Crossing by an average of 19% in the peak hours as a result of the Project (as set out in Traffic Forecasts Non-Technical Summary [APP-528]) which would reduce the likelihood of incidents at Dartford and make the crossing more resilient. The Project's design also reduces the risk of incidents occurring at the new crossing. The tunnel for the Project can be used by vehicles carrying hazardous loads and can accommodate higher and wider vehicles. The Project has also been designed as a free flow addition to the road network and does not have closely spaced junctions. Both crossings would be managed in accordance with standard National Highways Incident Management Processes (DMRB GM703) to provide a co-ordinated response to incidents at either crossing, including management through the Regional Operations Centre, Traffic Officer resources, national management escalation structure for dealing with the response to different levels of incident, and communications resources for advanced warnings (message signs, social media, press, radio etc.). The increased resilience of the network would relieve congestion on the surrounding local road area, which would be beneficial for both private and public transport, and would improve access to jobs for those living across the Lower Thames area. The forecast economic impacts of the Project are set out in more detail in the Combined Modelling and Appraisal Report (ComMA) Appendix D: Economic Appraisal Package – Economic Appraisal Report [APP-526] and the ComMA Appendix D: Economic Appraisal Package – Level 3 Wider Economic Impacts Report [APP-527]. The Applicant welcomes the conclusions of the Dartford Local Plan Strategic Transport Modelling, and notes that they align with the conclusions of the Applicant's transport modelling. The beneficial impact on the road network in Dartford Borough is reflected by the positive economic benefits of the Project within Dartford.
Pages 19/20 Paragraphs 6.3 to 6.6	6.3 There is overwhelming evidence that the Proposal will have significant local and wider benefits for the residents of Dartford. This is substantiated by the output of the Applicant's summary of potential impacts of the Project on local communities

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LIR Reference	Local Impact Report Extract / Applicant's Response
	(PINS Ref: TR010032/APP/7.16 - Version 1.0 – October 2022) as well as evidence in Kent County Council's Relevant Representation submission (PINS Application Ref TRO10032-001981).
	6.4 In summary, in addition to widely recognised economic benefits, there are positive environmental and social impacts of the Project for residents of Dartford including:
	 Air Quality – Will support targeted improvements to air quality at AQMA sites in Dartford currently experiencing exceedances of annual mean of nitrogen oxides and PM10s particularly at the Tunnel Approach to Dartford Crossing and Dartford Town Centre.
	 Traffic Congestion – With the predicted reduction in traffic from the Project, there will be significant health benefits for Dartford residents including reductions in congestion, queuing of vehicles on local roads and noise with free flow traffic. There will also be reduction in journey time delays. Tackling congestion is an essential requirement before plans for increased bus use and active travel modes can be fully realised, given the strong disincentive and adverse conditions current congestion levels in Dartford generate.
	 Better wellbeing and access to local amenities –Reduction in traffic congestion will improve the quality of life for the local communities with greater opportunity to access healthcare, shopping facilities, town centre, open space, education and jobs, particularly in and around the town centre. Dartford is expected to benefit from improved connectivity and resilience across the wider road network with reduced congestion at Dartford Crossing supporting a healthier environment for residents and positive mental health outcomes.
	 Road Safety – The Project will have an overall positive impact on road safety. Project will be designed to the latest safety standards, in contrast with the out of date and concerning conditions of the current crossing.
	6.5 To maintain the successful sustainable growth and regeneration of Dartford, it is essential that the Project proceeds in order to alleviate Borough-wide problems associated with the crossing and to realise all the above benefits. This is necessary for (as indicated through the Dartford Local Plan Strategic Transport Modelling and other evidence) further development, economic growth and a sustainable transport network require a basis of enhanced conditions and reduced congestion arising from the Project, not only for essential private vehicles but also to allow more reliable bus services and an attractive environment for walking and cycling.
	6.6 In conclusion, DBC growth plans need LTC to ensure an acceptable environment for Dartford in the future. Not only allowing use of private cars, but facilitating bus use and an improved environment for walking and cycling. The projected benefits of the Project aligns with this need in terms of addressing long term congestion issues, improving the quality of life and providing economic opportunities for new community infrastructure as referenced in Applicant's "Need for the Project" submission (Ref: TR010032-001291-7.1).

LIR Reference	Local Impact Report Extract / Applicant's Response
Applicant's Response	The Applicant welcomes the comments made in the Local Impact Report from Dartford Borough Council.
Paragraph 7.1 Page 21	The Examination Authority's attention is brought to DBC's Relevant Representation submitted on the 24 th February 2023 and the Statement of Common Grounds (PINS Scheme Ref: TR010032/APP/5.4.4.3 – Agreed draft Version 2 to be submitted by Applicant at Examination Deadline 1 in July 2023). Specifically with reference to Requirement 14 in Schedule 2 of the draft DCO as identified in the Application's transport assessment document (Scheme Ref: TR010032/APP/7.9 Transport Assessment Appendix F Wider Network Impacts Management and Monitoring Policy Compliance). DBC have highlighted the need for a more robust monitoring of the traffic flow and air quality at key locations along the A282 corridor during construction and before/after scheme operation. This aligns with similar comments in KCC's Relevant Representation submission (PINS Application Ref TR010032-001981).
Applicant's Response	The Applicant appreciates that there will be changes in traffic flows during construction and has sought to avoid or reduce construction impacts where feasible. The outline Traffic Management Plan for Construction (oTMPfC) [REP1-174] sets out measures to minimise disruption to users of the highway network and details the monitoring system that will be implemented by the contractors. This monitoring system will capture real-time data to confirm the effectiveness of traffic and vehicle control measures and ensure the arrival and departure times of vehicles from compounds are controlled. Various monitoring measures such as automatic number plate recognition, traffic flow monitors, and possibly web-based camera systems or similar systems will be implemented to capture data on traffic composition, traffic flow, journey times (to a limited extent), and traffic safety (collision) data. The monitoring system will capture and report information related to construction traffic such as compliance with vehicle routing, incidents and accidents reporting. The monitoring data will be collected and held by the contractors as part of their supplier set-up procedures, and the systems will be coordinated across all contracts and utility works to ensure consistency and ease of reporting and appraisal. The data will be used to inform monthly reporting to the Traffic Management Forum (TMF), allowing for the analysis of the performance temporary traffic measures, including identification of any non-compliance or complaints, and the impact of construction traffic. Throughout the construction period, active engagement with the relevant highways authorities, will be maintained to oversee the management of the monitoring system and collaboratively determine appropriate monitoring locations. The TMF will then be able to assess perceived impacts and actual impacts to determine necessary actions to resolve any issues. Where construction activities for the Project are likely to proceed at the same time as the construction of other projects

LIR Reference **Local Impact Report Extract / Applicant's Response** are set out in the Environmental Statement (ES) Appendix 2.2: Code of Construction Practice (CoCP), First Iteration of Environmental Management Plan [REP1-157]. Once the Project opens for traffic, the Applicant is proposing to monitor the impacts of the Project on traffic on the local and strategic road networks as set out in the Wider Network Impacts Management and Monitoring Plan (WNIMMP) [APP-545]. The WNIMMP describes how the monitoring scheme must include the following information: Details of a before-and-after survey to establish the baseline traffic levels and the changes in traffic The locations to be monitored The methodology to be used to collect the required data The periods over which operational traffic is to be monitored The method of assessment of traffic data Programme for the provision of the collected data to local highway authorities. It would not be appropriate to define the requirements at this time, because new technologies may become available that would better deliver the objectives of the monitoring scheme. Relevant authorities will have the opportunity to comment on their requirements through the consultation necessary as part of the process of discharging Requirement 14 of Schedule 2 of the draft Development Consent Order (DCO) [REP1-042] which secures the monitoring scheme. The Applicant is following the advice of Design Manual for Roads and Bridges (DMRB) LA 105 Air Quality (Highways England, 2019) with regard to operational air quality monitoring. The Applicant would only propose to undertake monitoring if its assessment predicted significant air quality effects which triggered the requirement for mitigation, which is not the case. The purpose of the monitoring would be to determine when and if the mitigation (for example speed restrictions) can be removed. As described in ES Chapter 5: Air Quality [APP-143] there are expected to be no significant air quality effects in relation to human health receptors and compliance with Limit Values, and therefore in line with the advice of DMRB LA 105 Air Quality (Highways England, 2019), mitigation and monitoring is not required for the Project in relation to these effects. Significant air quality effects have been predicted as a result of increased nitrogen deposition at a number of ecologically designated sites; as such the mitigation and compensation measures identified to address effects on ecologically designated sites are described in ES Appendix 5.6: Project Air Quality Action Plan [APP-350]. An ongoing monitoring strategy is not proposed in relation to air quality effects on designated sites. Monitoring will not aid in determining whether the mitigation is effective as there is no ability to monitor conditions with and without the Project. Given that the impacts are as a result of the change in nitrogen deposition rather than, for example, absolute concentrations against AQS objectives, monitoring would only provide information related to the conditions at the time the monitoring was undertaken.

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