



# Highways England

## A2 Bean and Ebbsfleet Junction Improvements

### Report on Public Consultation

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**Document Control**

The Project Manager is responsible for production of this document, based on the contributions made by his/her team existing at each Stage.

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# 1 Introduction

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## 1.1 Scheme background

The A2 Bean and Ebbsfleet junctions are situated on the A2 trunk road, approximately 1.2 miles apart (2km) within north Kent.

The Bean junction connects the A296 and B255, which provides access to the Bluewater regional shopping centre, to the A2 and the wider area and is particularly busy at weekends.

The Ebbsfleet junction serves the wider area and Ebbsfleet International Rail Station, connects the A2 to the A2260 and will also provide access to new and ongoing developments in the area.

In the coming years the Bean and Ebbsfleet junctions will serve developments such as the Ebbsfleet Garden City development. This development will create 15,000 new homes and more than 30,000 jobs could be created. (Source: Ebbsfleet Development Corporation).

Traffic modelling has indicated that without improvements to both junctions, the road network will become highly congested resulting in considerable delays and associated environmental issues.

At Bean junction, the proposed development will result in traffic using the A2 Bean junction (including the A296) increasing by 50-60% during weekday and weekend peak periods by 2037 compared to 2014 traffic levels.

At Ebbsfleet junction, the proposed development will result in traffic using the A2 Ebbsfleet junction increasing between 170 – 200% during weekday peak periods by 2037 compared to 2014 traffic levels.

## 1.2 Scheme objectives

The objectives were developed in conjunction with the Department for Transport and local authorities. They are to provide improvements at A2 Bean and A2 Ebbsfleet junctions to:

- Support the economic and housing growth proposed for the north Kent area, including Ebbsfleet Garden City;
- Increase the capacity of the junctions and minimise the impact on the A2;
- Improve journey times;
- Improve road safety;
- Minimise impact on the environment; and
- Provide value for money with a Benefit Cost Ratio (BCR) of at least 2:1. This means that for every £1 spent on the scheme at least £2 of economic benefit will be created.

The proposed scheme is being delivered by Highways England. It is funded by the Department for Transport with Section 106 contributions provided via the Kent Thameside Strategic Transport Programme and the Ebbsfleet Development Corporation. The Kent Thameside Strategic Transport Programme consists of seven improvement schemes (including the A2 Bean and Ebbsfleet junctions) that will be delivered as developer contributions come forward to Gravesham Borough Council, Dartford Borough Council and Ebbsfleet Development Corporation. The programme is administered by Kent County Council. The Ebbsfleet Development Corporation is the planning authority set up by the Government to speed up delivery of up to 15,000 homes and create Ebbsfleet Garden City in north Kent.

Highways England considered a number of options for both junctions. Following a detailed review of these proposals, Highways England concluded that there is one option for each junction which meets the scheme objectives. Details of the proposal for each junction are as follows:

The proposed Bean junction improvements broadly follow the existing road layout but with an additional bridge over the A2 adjacent to the existing bridge and a new slip road on to the A2 for eastbound traffic. It retains the existing junction layout but with the current roundabouts enlarged and converted to traffic signal control. A new bridge over the A2 for southbound traffic is provided to the east of the existing Bean Lane Overbridge, which is retained for northbound traffic.

The proposed Ebbsfleet junction improvements broadly follow the existing road layout but with the existing roundabouts enlarged and with traffic signal control. Access is provided at the junctions to the new and ongoing developments. The link road between the roundabouts is widened from the existing single carriageway to a dual two lane carriageway. The existing eastbound and westbound slip roads from the A2 are retained. The eastbound and westbound slip roads to the A2 are widened.

### 1.3 Purpose of this report

This report aims to provide an overview of the A2 Bean and Ebbsfleet Junction Improvements Public Consultation carried out between 18<sup>th</sup> January and 1<sup>st</sup> March 2017 about the proposed options for Bean and Ebbsfleet junctions. The report summarises the consultation arrangements, meetings with and enquiries from members of the public and stakeholders, and issues highlighted and suggestions made in responses to each of the consultation questions. The summary is accompanied by charts providing an overview of responses to closed questions, and by quotes providing an illustration of views expressed by respondents in responses to open questions.

## 2 Consultation arrangements

### 2.1 Overview

The A2 Bean and Ebbsfleet Junction Improvements Public Consultation ran for six weeks between 18<sup>th</sup> January 2017 and 1<sup>st</sup> March 2017. The consultation involved public exhibitions and presentations around Dartford and Gravesend, a website with information about the project, and information delivered to homes in the area.

Participants were invited to comment on a variety of aspects of the project, with documentation and questions covering the junction improvements at Bean, the junction improvements at Ebbsfleet, and the scheme overall (see Appendix C for the consultation questionnaire). Participants could submit their responses and queries in the following ways:

- Online – through an online questionnaire;
- By email – via the scheme email address: A2BeanandEbbsfleetJunctionImprovements@highwaysengland.co.uk;
- Freepost – by sending letters or the paper questionnaire to the scheme Freepost address: Freepost A2 Bean & Ebbsfleet junction improvements; and
- Telephone – by calling the Highways England 24 hour Customer Contact (CCC) number 0300 123 5000.

### 2.2 Consultation publicity

The consultation was publicised using a variety of methods to ensure that members of the public were aware of the scheme and the opportunity to provide comment and feedback.

#### 2.2.1 Online

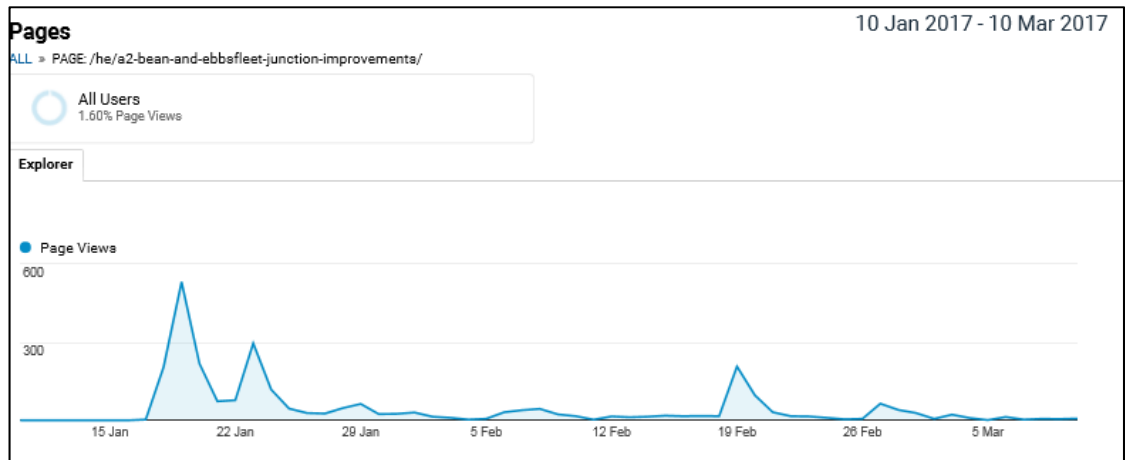
The scheme has a dedicated page on the Highways England website (<http://roads.highways.gov.uk/projects/a2-bean-and-ebbsfleet-junction-improvements/>) giving information about the scheme and links to relevant documentation, including the Technical Appraisal Report and Environmental Assessment Report. During the period of the consultation, the consultation questionnaire was also featured on this website, and respondents could fill in their responses online.

**Fig. 1 Page statistics for <http://roads.highways.gov.uk/projects/a2-bean-and-ebbsfleet-junction-improvements/> over the consultation period.**

Pages								10 Jan 2017 - 10 Mar 2017
<a href="#">ALL</a> > PAGE: /he/a2-bean-and-ebbsfleet-junction-improvements/								
Page	Page Views	Unique Page Views	Avg. Time on Page	Entrances	Bounce Rate	% Exit	Page Value	
	2,691 % of Total: 1.60% (168,335)	2,171 % of Total: 1.85% (117,464)	00:04:20 Avg for View: 00:02:07 (105.29%)	2,090 % of Total: 3.40% (61,391)	82.78% Avg for View: 69.90% (29.55%)	74.80% Avg for View: 36.47% (105.12%)	US\$0.00 % of Total: 0.00% (US\$0.00)	
1. /he/a2-bean-and-ebbsfleet-junction-improvements/	2,691 (100.00%)	2,171 (100.00%)	00:04:20	2,090 (100.00%)	82.78%	74.80%	US\$0.00 (0.00%)	

Rows 1 - 1 of 1

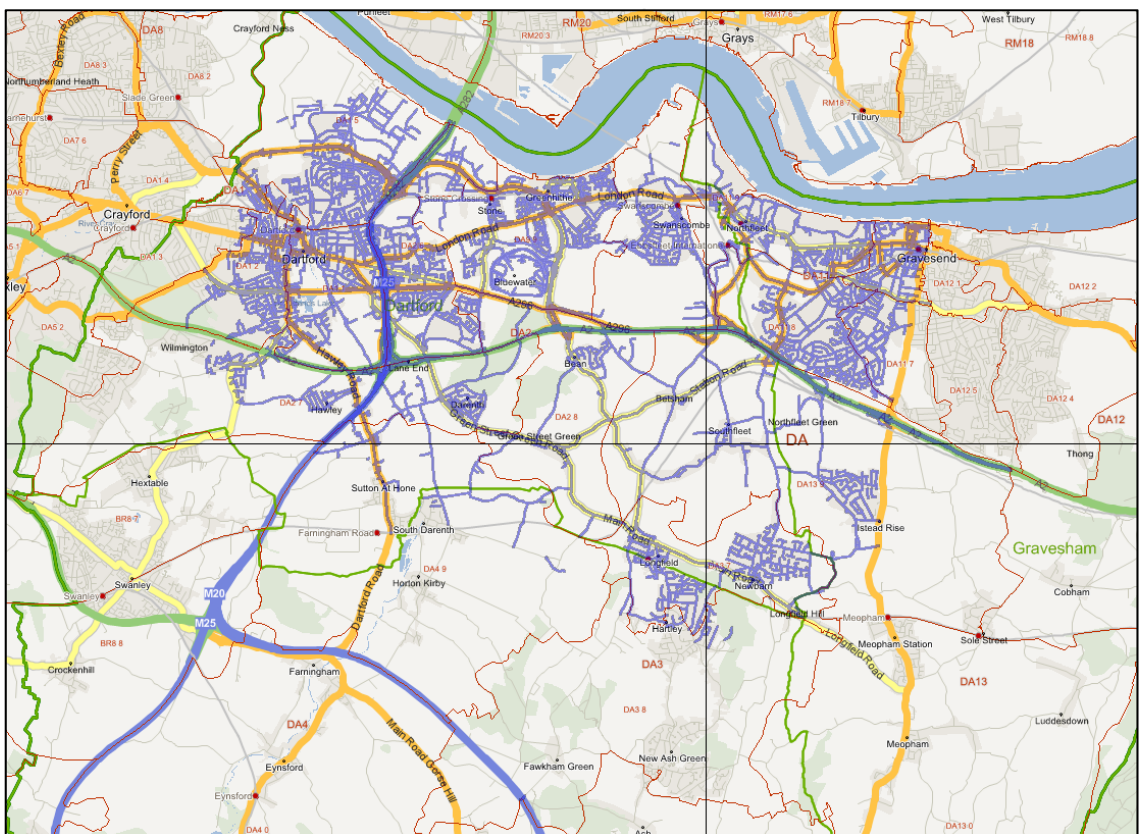
**Fig. 2 Page views for <http://roads.highways.gov.uk/projects/a2-bean-and-ebbsfleet-junction-improvements/> over the consultation period.**



### 2.2.2 Letter drop

Letters about the consultation were distributed to 74,219 households in the area surrounding the scheme.

**Fig. 3 Map of letter distribution area**



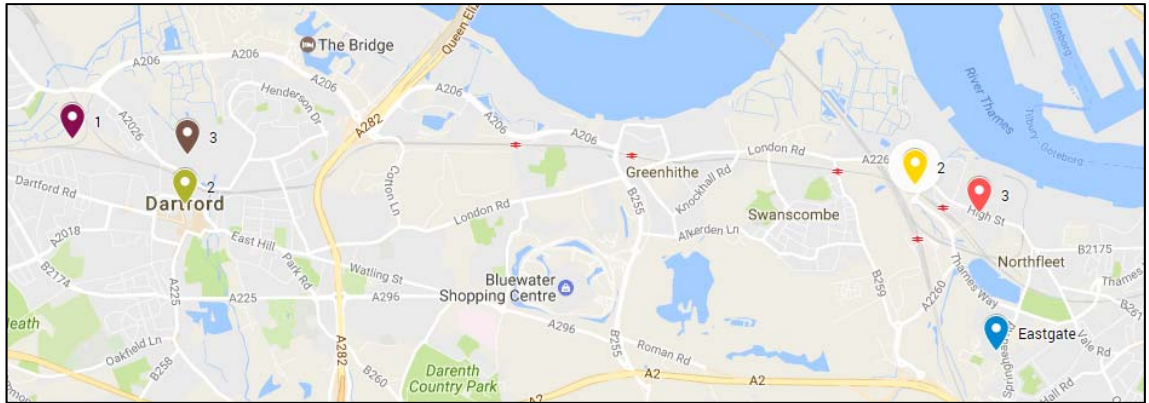
Letters were also sent to more than 150 relevant stakeholders, including affected land owners, MPs, MEPs and local councillors.



**2.2.3 Poster distribution**

A poster campaign at Bluewater Shopping Centre was visible throughout the consultation period. In addition, posters and information leaflets about the consultation were distributed at 11 locations (coffee shops, diners and auto-services) around Dartford and Northfleet stations in time to attend the last exhibition event held on 20 February 2017.

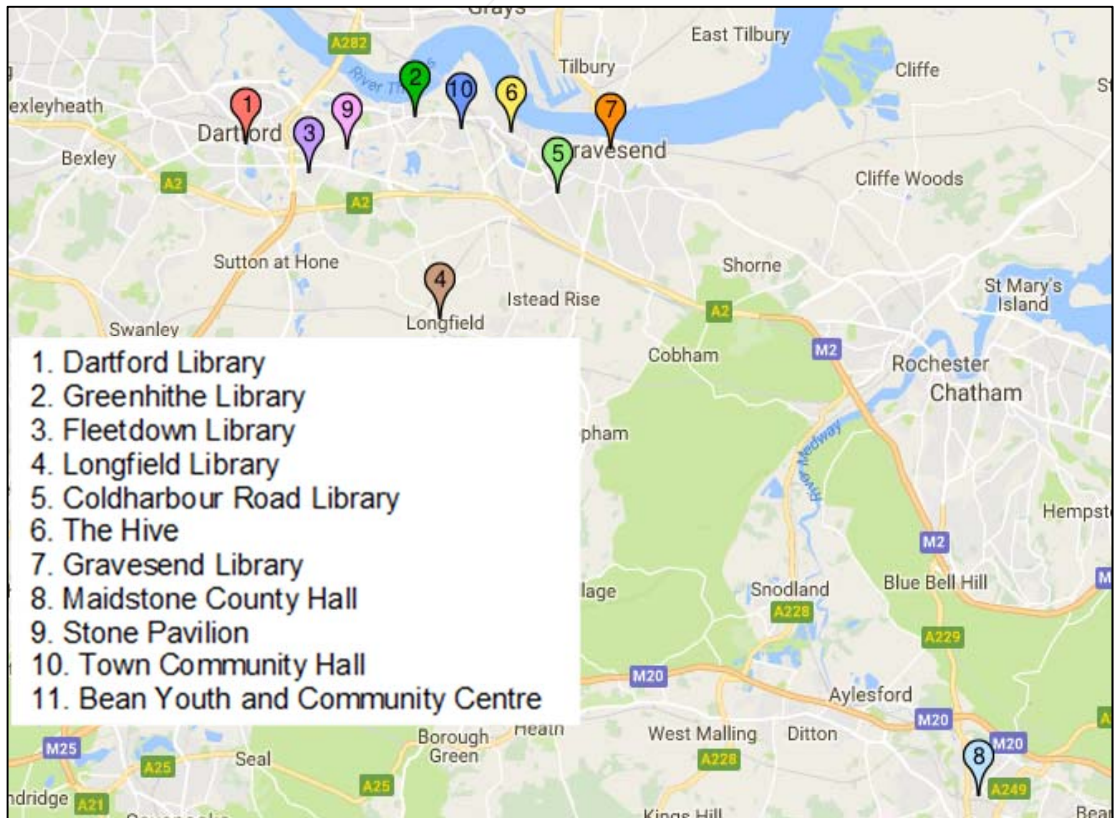
**Fig. 4 Map of poster distribution locations**



**2.2.4 Brochure collection points**

The consultation brochure and paper questionnaire were available for collection at several community venues in the local area. These were arranged in conjunction with relevant local councils.

**Fig. 5 Map of brochure collection points**



### 2.2.5 Stakeholder promotional activity

The consultation was promoted by several stakeholders across their website and social media platform.

**Ebbsfleet Development Corporation** featured the consultation on [blog posts](#) on their website, and also promoted the consultation on their Twitter and Facebook accounts.

**Fig. 6 Screenshot of tweet from Ebbsfleet Development Corporation promoting the consultation.**



**Local Councils.** Dartford Borough Council, Gravesham Borough Council, Kent County Council, and Swanscombe and Greenhithe Town Council promoted the consultation through their Twitter and Facebook pages.

**Bean Residents Association.** Bean Resident's Association raised awareness about the consultation with local residents through their newsletter and mailing lists and website promotion.

### 2.2.6 Media events

Highways England representatives were interviewed about the scheme and the consultation process by BBC Radio Kent and ITV Meridian. The consultation was also covered by the Gravesend Messenger (local newspaper).

## 2.3 Public Information Events (PIE)

Five Public Information Events were held during the course of the public consultation period:

**Table 1. Times and locations of Public Information Events**

<b>Date and Time</b>	<b>Location</b>	<b>Attendance</b>
Wednesday 18 <sup>th</sup> January 5.30pm – 8.00pm	Bean Youth and Community Centre High Street, Bean, DA2 8AS	60
Saturday 21 <sup>st</sup> January 12noon – 7.00pm	Bean Youth and Community Centre High Street, Bean, DA2 8AS	90
Saturday 28 <sup>th</sup> January 12noon – 7.00pm	Eastgate 141 Springhead Pkwy, Gravesend, DA11 8AD	32
Wednesday 1 <sup>st</sup> February 1.00pm – 8.00pm	Eastgate 141 Springhead Pkwy, Gravesend, DA11 8AD	38
Monday 20 <sup>th</sup> February 1.00pm – 8.00pm	Eastgate 141 Springhead Pkwy, Gravesend, DA11 8AD	54

These consultation events were exhibition-style and open to any interested members of the public and stakeholders. People were able to drop in at any time within an advertised window to read and hear more about the proposals and ask questions of technical experts. A Highways England property representative was also present at every event to answer land owner queries.

As well as exhibition boards giving information about the scheme, a [video visualisation](#) was played at the consultation events. This video was also available on the [scheme website](#).

A stakeholder event for MPs, MEPs and local government members was held in advance of the first public event from 14.30pm on Wednesday 18<sup>th</sup> January. Nine local councillors attended from across Dartford Borough Council and Bean and Southfleet Parish Councils.

A range of additional stakeholder events were held during the course of the consultation. These have been summarised in Chapter 8.

## 2.4 Consultation responses

A total of 169 responses to the consultation were received. Submissions were received as online response forms (via the website), through emails, or offline (paper response forms, letters). Responses received through the Highways England 24 hour customer contact number (CCC) were noted in text format and processed accordingly. The table below provides an overview of the number of responses received by response type.

**Table 2. Count of responses by type**

<b>Response Type</b>	<b>Count</b>
Online questionnaire	84
Paper questionnaire	47
Email or letter	36
Phone (Highways England Customer Care number)	2
<b>Total</b>	<b>169</b>

## 3 Reporting methodology

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### 3.1 Data receipt and digitisation of all submissions

At the outset of data processing each response was assigned a unique reference number and an indication of the response type. Responses were handled differently according to the form in which they were received. All responses were recorded in a bespoke consultation database.

#### 3.1.1 Responses via the website

Online submissions were downloaded from the consultation website and then added digitally to the consultation database.

#### 3.1.2 Paper response forms and letters received via the freepost address

A freepost address operated for the duration of the consultation for respondents to submit their response in hard copy. Upon receipt, letters and paper-based response forms were logged and given a unique reference number. These were then scanned in order to be imported into the consultation database, and then the content data entered.

#### 3.1.3 Email responses

Responses contained within the body of an email were digitally imported into the consultation database. Responses which were sent through as email attachments were imported into the consultation database and where necessary data-entered.

#### 3.1.4 Responses received by the Highways England Customer Care (CCC) number

On the occasion that a respondent called the Highways England Customer Care number and gave a comment on the consultation, those details were recorded by the call handler and passed to the project team. The detail of the call was then imported into the consultation database.

#### 3.1.5 Responses containing non-text elements

For submissions containing images, maps and other non-text content a reference to a PDF version of the original submission was made available to analysts so this information could be viewed when necessary.

### 3.2 Analysis process

In order to analyse the responses, and the variety of views expressed, a coding framework was created. The purpose of the framework was to enable analysts to organise responses by themes and issues so that key messages as well as specific points of detail could be captured and reported.

The process of developing the framework for this consultation involved a senior analyst reviewing an early set of responses and formulating an initial framework of codes. A two-tier approach was taken to coding, starting with high level themes and then specific codes. The top-level themes are listed below. The full coding framework is available in Appendix A.

- Bean

- Consultation
- Ebbsfleet
- Other
- Scheme

Each code is intended to represent a specific issue or argument raised in responses. Natural language codes (rather than numeric sets) are applied as this allows analysts to suggest refinements and additional issues, and aids quality control and external verification.

The application of a code to part of a response was done by highlighting the relevant text and recording the selection. A single submission could receive multiple codes. Where similar issues were raised, care was taken to ensure that these were coded consistently.

The coding process enabled all responses to be indexed according to the issues raised by respondents, and enabled a detailed summary of the content by means of this report.

### 3.3 Reporting

The following chapters summarise all responses to the consultation, including both members of the public and stakeholders.

As mentioned above, this summary report includes quantitative information about the issues raised in the consultation responses in the form of charts as well as mention of numbers of respondents commenting on particular issues.

Where numbers are used in this report they represent the number of times an issue was raised across all consultation questions, including those responses which do not directly address the questions. Many respondents, particularly stakeholders, did not use the questionnaire; their responses are reported here under the same headings to ensure that all responses on a particular issue are found together.

Numbers in the report text are used to help the reader better understand the balance of opinions among respondents. In considering the numbers reported it is important to remember that this was an open and qualitative process, meaning that anyone who wished to could participate and respond in the way they chose to. Therefore, the quantitative information provided is not representative for a wider population - it only reflects the views of those who chose to respond (169 respondents).

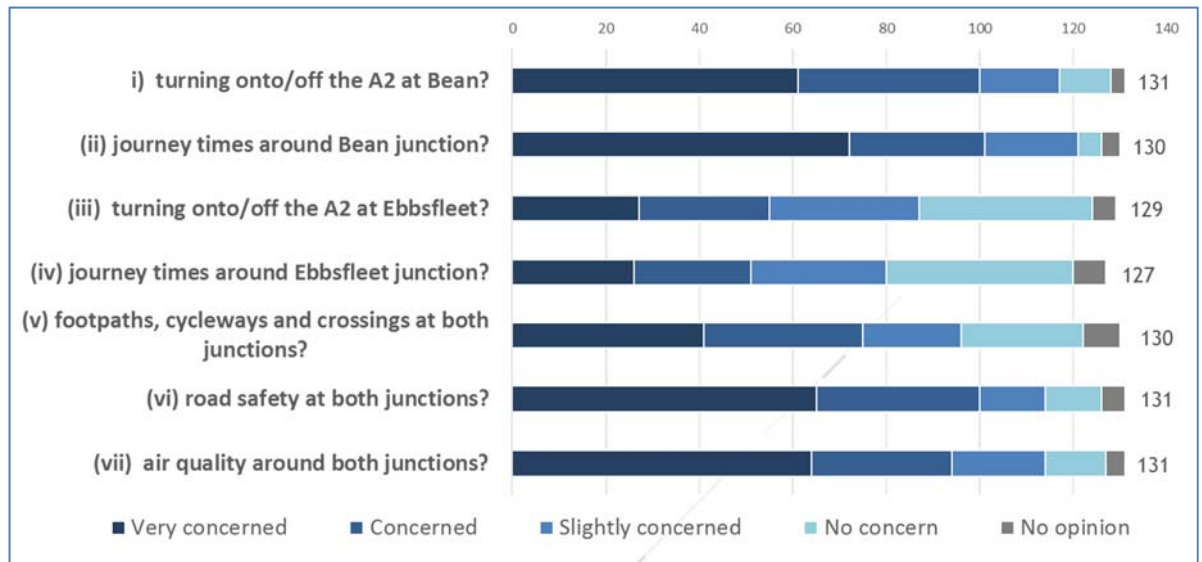
An additional thought to keep in mind when considering numbers and views expressed in the report is that those with strong views are generally more likely to respond to a consultation, whether their views are supportive or critical. This emphasises the point above that the consultation responses do not necessarily reflect the balance of opinion in the wider population. This is also relevant to the geographical analysis described below.

Quotes from respondents are used to illustrate particular arguments throughout the report. These quotes are taken directly from consultation responses and any spelling or grammatical errors are those of the respondent.

## 4 Response analysis – overall scheme

### 4.1 Concern over current situation

**Fig. 7 Count of responses to Question 1: “1. How concerned are you about the following current issues?”**



### 4.2 Summary of issues about the overall scheme

In addition to the closed question above, respondents were also asked the following open question: “Do you have any further comments about this Bean and Ebbsfleet junction improvements scheme?”. 73 responses were given to this question. In addition to the responses to this specific questions detailed above, the summary below includes related comments from respondents who did not follow the questionnaire format, and also comments about the overall scheme that were made in response to other questions.

#### 4.2.1 Need case

Some respondents stress the importance of planning for the future when designing the scheme, saying that a short-term fix is not good enough as it will not help growth or provide a sustainable infrastructure for locals.

Respondents highlight that the scheme will need to have capacity for the traffic volumes created by Bluewater, Ebbsfleet International Station, large-scale housing developments, Swanscombe Theme Park and Ebbsfleet Garden City.

They also highlight that impact of other road infrastructure, such as Dartford Crossing and the M25, saying that the Bean and Ebbsfleet junctions currently cannot cope with the congestion that occurs after an incident or delays on these roads. While some respondents see this as a cause for improvement to the Bean and Ebbsfleet junctions, others argue that it is actually reason to improve the Dartford Crossing instead.

Respondents stress that the need for improvements is urgent to support development that is already underway, planned for the near future, or already operational as with Bluewater.

Many say that the plans being put forward in this scheme are too late and that the process should have begun years ago.

Many are concerned that the planned 2023 completion date is after the planned opening of the Swanscombe Theme Park in 2022. They argue that the improvements need to be implemented immediately and plans accelerated to avoid the junctions being overwhelmed before the changes are made.

Others stress that the success of Ebbsfleet Garden City will depend on a well-designed road infrastructure.

#### **4.2.2 Challenge to proposals**

##### **Assessments**

One of the most frequent issues that respondents raise is that they do not believe that a sufficient and accurate assessment has been done regarding current and expected traffic flows.

Many say that the peak hours referred to in the consultation documentation and the proposals are incorrect, reporting that the weekday peak times begin earlier, and finish later than Highways England has assumed. They raise concerns that as the traffic data used was collected in the summer of 2014 it has not accounted for the seasonal peak of Bluewater traffic, or any of the developments since 2014, both of which they say have a drastic impact on congestion.

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*“The proposals have been developed using a traffic survey in July 2015. It is known that traffic at this junction is far greater for at least 6 weeks at Christmas and at other times of the year. So Junction will not improve congestion for at least 20% of the year.” – User 100034*

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A large proportion of respondents feel that it is inappropriate for Highways England not to plan for the proposed Swanscombe Theme Park going ahead. They argue that because the theme park would attract a huge number of drivers, and because the proposal they have put forward seems to contradict this scheme, it is most likely that if the theme park is approved, the scheme will need complete redesign and the consultation process will need to be repeated.

Some respondents query the accuracy of the traffic modelling and its capability of data-driven traffic simulators to predict driver behaviour, especially for a large number of drivers and how they may behave in heavy congestion. One asks for information on the modelling system used and its track record of accuracy.

Others say that the Highways England planners must come and use the junctions themselves at different peak times to see how they work in reality; they do not believe that Highways England really understands the situation at all, and say that the proposals reflect this.

Respondents also say that the assessment is flawed in the following areas:



- The Benefit Cost Ratio (BCR) is for 60 years, but the layout is forecast to support traffic volumes until 2037 which is only 20 years. This invalidates the BCR, as further investment will be needed then;
- Option 3 does not actually reach Darenth Wood as the plans detail. They say that suitable field assessment has clearly not taken place and therefore the environmental reasons for rejecting Option 3 are not valid. They suggest sending somebody to visit the site on foot to reassess; and
- Despite accounting for large housing developments, the scheme does not account for the required services to support these such as hospitals and schools.

## Design

Many respondents challenge the design of the scheme itself and argue that it will not meet the traffic demands or does not address the problems at hand. These respondents make the following comments;

- The A2 main carriageway cannot cope with the forecast increase in traffic, and because this scheme does not address that it will not achieve the expected improvements;
- The scheme does not address congestion issues at the Dartford Crossing, and therefore it will not reduce congestion at Bean and Ebbsfleet junctions;
- The scheme as proposed is a 'band-aid fix' and will quickly be in need of further improvement as traffic volumes continue to increase;
- Rather than solving problems at the junctions it re-arranges them, moving them to different pinch points; and
- The proposals may improve ease of leaving A2 but will make it harder for drivers to join it from the junctions.

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*"This also, will NOT cope with the additional housing and Paramount Park visitors scheduled over the next decade to arrive, and will therefore be almost unfit for purpose even before building starts" - User ID 86*

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Many respondents stress that the local junctions (Bean, Ebbsfleet, Pepperhill, and the Northfleet junctions) should be considered together as one design rather than separate junction improvements, arguing that the current approach leads to lack of synchronisation and simply moves points of congestion between them. They point out that some are just two miles apart.

## Costs

Several challenge the budget, arguing that it is too low to achieve what is necessary and a higher budget should be allocated.

Many question the value for money provided by the scheme. They feel that the proposals do not offer enough improvement to justify the cost. One respondent asks what the main cost factors are, and questions what funds Bluewater are contributing to the scheme.

Many say that as they do not believe the scheme will be a long-term solution or even successful at all, they feel it is a waste of money as the issues will need to be re-addressed later down the line at additional cost.

Some suggest that the money could be better spent investing in other modes of transport, reducing the number of cars on the roads.

Some respondents feel that the cost of Option 3 has been overestimated and could easily be reduced, or that the cost difference does not justify rejecting it in favour of Option 5. They feel that this is a repeat of mistakes originally made with Bluewater roads.

One respondent adds to this that it is currently cheaper to construct new roads and junctions than it will be in a few decades' time, and therefore it saves money in the long term to invest in a scheme with more drastic changes that will provide for the next 40 years.

Some respondents have much broader concerns relating to the areas' infrastructure that are outside the scope of the scheme. These people say that;

- Current roads are not well maintained, money should be better spent addressing this;
- A longer-term plan is needed to get cars off roads and reduce demand rather than aiding its growth;
- Freight should be moved to water and rail routes. They feel that large companies use money and influence to continue unsustainable means of transport and should be enforced to improve;
- They do not trust the motivations and the beneficiaries behind the scheme and the developments that it supports. They feel that the development in the area is being forced so that the government can meet its targets and so that developers and offshore investors can see profits. They do not believe the residents will benefit from the changes in any way.

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*"We need to stop building and starting making big changes to how traffic is managed and moved around." User 50*

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### **4.2.3 Traffic lights**

Many respondents oppose traffic lights at either junction, feeling that they are ill-advised and that traffic should instead be free-flowing. They argue that they cause congestion by holding up traffic that could otherwise pass through freely, and in this instance, would cause tailbacks as there is not enough queuing space at either of the junctions. They feel that the roundabouts are all too small and the volume of traffic too large to be effectively managed by signalisation and that cars will block the other entrances to the roundabout.

Some oppose the concept of two junctions so close together being signalised, arguing that queues between them could cause frequent congestion, or that congestion at one roundabout will cause congestion at the other. They raise Bluebell Hill as an example, saying that it is similar to the proposed scheme having two signalised gyratories connected by a link road and is often overwhelmed during morning and evening peak hours, with queues at one junction tailing back to block traffic at the other junction.

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*“For drivers, having a green light with the way forward blocked gives rise to frustration and ultimately for regular users, the traffic signals will become disreputable and passing a signal at red becomes more frequent”- User ID 42*

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Other respondents make specific suggestions regarding the use of traffic lights, including:

- Ensuring the lights are the latest technology for efficient traffic control;
- Only having the lights operational at weekday and Bluewater peak times;
- Having sensor controlled traffic lights to ensure that they work with the flow of traffic, not against it;
- Ensuring the lights at both junctions are synchronised with each other;
- Installing obvious yellow enforcement cameras to discourage blocking of the junction; and
- Installing traffic lights at the B255/London Road roundabout as well.

One respondent queries if the lights will be programmed to favour any particular stream of traffic, and also asks how long the signal will remain green for those leaving the village, and how long they will have to wait between signals.

#### **4.2.4 Non-motorised users**

Many respondents are interested in the provision for cyclists, pedestrians and other non-motorised users (NMUs) as well as public transport users. They say that the area needs a fully integrated travel plan that improves bus links between Bluewater, Darenth Valley Hospital, Ebbsfleet International Train Station, Greenhithe Station and Gravesend.

They request that that local pedestrian and cycle routes are made more convenient, desirable and safer around both junctions. Some stress that NMUs must be considered at the design stage and during construction, asking that the routes are not blocked while work is underway and that safety is not compromised.

#### **4.2.5 Community impact**

Several respondents share concern that the community will be negatively impacted by the increased traffic, saying that north Kent is already too crowded and that local villages could potentially lose their character. Some also feel that Highways England and developers do not genuinely care about the impact they have on residents and their quality of life.

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*“There needs to be more consideration given to the people who already live in this area and already have to contend with the daily traffic problems and the awful air quality, increased traffic will just make these problems worse” - User ID 13*

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A few respondents feel that there is a potential impact on several small businesses, either by the proposed layout changing the prominence of their business or by access being blocked during construction. Springhead Nursery, Merrychest Café and Forestrall Timber Merchants all operate within the area and request that Highways England considers the impact on their trade during the design and construction of the scheme.

Some respondents stress that the narrow country lanes in the local road network must be protected by preventing HGVs from using them as a bypass to the A2. They report that HGVs frequently ignore width restrictions for local country lanes and this has previously resulted in damage to property, violence, and even police intervention.

#### **4.2.6 Construction period**

Many respondents are worried about the construction period for the scheme and ask how disruption will be minimised and congestion eased. They stress the importance of well-planned diversions, timings of works and noise levels during construction.

Others highlight that the lanes surrounding the junctions already see congestion due to too many vehicles attempting to bypass delays on the main carriageway. They worry that these routes may become even worse if the construction is not done at night time in order to keep the roundabouts operational during the day. Some raise particular concern regarding HGVs, which they say must not be allowed to use the narrow country lanes.

Others are concerned about the length of time needed to complete the works, saying that the ongoing disruption will be detrimental to the quality of life of residents and that the impact on traffic while underway will be severe.

Many respondents request that Highways England is sensitive and considerate to local residents regarding traffic noise during construction.

#### **4.2.7 Environment**

A major concern that respondents raise is that existing levels of pollution in the local area are already exceptionally high, increasing risk to health and affecting quality of life. Some feel that the problem is largely ignored by developers and government.

Some respondents argue that the scheme will make the situation considerably worse by increasing the volume of cars driving through the area. One respondent requests whether the new layout will exceed any UK, EU or UN air quality and noise pollution limits.

Some respondents request specific environmental mitigation methods such as quiet tarmac, planting of trees, barriers and landscaping in order to mitigate the environmental effects in the area.

## 4.3 Stakeholder responses

### 4.3.1 Need case

Many stakeholders agree that there is a clear need case for improvements to the junctions. They say that something must be done to improve the transport system in the area in order to enable sustainable growth and success for planned developments such as Ebbsfleet Garden City. They argue that if the current problems are not effectively and quickly resolved, it will deter further development and investment in the north Kent area (Bluewater, Ebbsfleet Development Corporation, HS1, Thames Gateway Kent Partnership).

Ebbsfleet Development Corporation reports that resident surveys that they have undertaken show that an efficient integrated transport network is a main concern of local residents.

CPRE Kent says that while they recognise the need case and welcome improvements, they feel that the right changes must be made and that Highways England must avoid an “anything is better than nothing” approach.

Stakeholders also stress the urgency of the need case and that delivery of the scheme should be sped up wherever possible (HS1, Thames Gateway Kent Partnership, Ebbsfleet Investment General Partners, Ebbsfleet Development Corporation, Land Securities Eastern Quarry Ltd, Bluewater).

### 4.3.2 Challenge/assessment/will not meet demand

Some stakeholders feel that the assessments that Highways England has undertaken in order to develop the proposals are not sufficient or that they are incorrect.

Many of these strongly oppose the exclusion of Swanscombe Theme Park and other local developments from the traffic modelling and the designs proposed by Highways England (Swanscombe and Greenhithe Town Council, Swanscombe and Greenhithe Town Council, Peninsula Management Group, London Resort Company Holdings, Bean Residents Association). Kent County Council requests continued liaison regarding the theme park throughout the scheme development in order to facilitate only one rebuilding of the junction.

Swanscombe and Greenhithe Council and London Resort Company Holdings (LRCH) criticise the lack of consideration for the theme park in the proposals design. LRCH clarifies that they respond to the consultation as if the theme park is already open and operational. They argue that it is an essential sensitivity test to consider the theme park in the modelling of the improvements. They state that as a Nationally Significant Infrastructure Project it has the same planning status as Lower Thames Crossing, which has been accounted for in the design, and as such should be taken into consideration by Highways England.

Stakeholders also feel that the traffic data used by Highways England was collected at a time that does not represent actual traffic flows in the area at all. As it was collected in summer, they argue that this does not take account of the significant seasonal peaks caused by Bluewater Shopping Centre, and because it was taken in 2014 it does not account for the level of development that has already taken place and the change in traffic volumes since then (Kent County Council, Swanscombe and Greenhithe Town Council, Swanscombe and Greenhithe Town Council, Ebbsfleet Investment General Partners, Land Securities Eastern Quarry Ltd, Bean Residents Association, Bluewater). They also say the weekday peak timings are incorrect and that in reality they start earlier and finish later than the proposals suggest.

CPRE Kent questions the validity of the data further by commenting that it has been taken from the modelling for Lower Thames Crossing and has been proven faulty.

Both CPRE Kent and Bean Parish Council say that simulated traffic modelling cannot accurately predict how drivers really behave at junctions.

Some stakeholders also refer to the level of uncertainty surrounding many of the proposed developments in the area, criticising the assumption of the Lower Thames Crossing route used in the proposals (Peninsula Management Group, Cycle UK). London Resort Company Holdings says that the local housing development plans have changed since assessments and that Highways England needs to update the information used.

Kent County Council, Swanscombe and Greenhithe Town Council, Peninsula Management Group, Cycling UK, Bean Residents Association all raise concerns that the scheme as proposed would not support the increasing demand. CPRE Kent and Bean Residents Association say that this is because it does not address the capacity issues on the A2 main carriageway.

Dartford Borough Council and Bean Residents Association both highlight budget constraints as a limitation on the success of the scheme. Bean Residents Association requests that a higher budget allocation be sought and comment that Ebbsfleet Development Corporation successfully requested an increase in budget.

CPRE Kent and Cycling UK raise some broader concerns regarding the national approach to development and transport. Cycling UK says that as London become more expensive the surrounding areas suffer more pressure on their roads and rail systems. CPRE Kent says that it is important to shift from a reliance on road systems to better use of rail and water links, arguing that creating more capacity on roads just adds to congestion, immediately filling up with a higher volume of cars.

#### **4.3.3 Layout and design**

Kent Police Traffic Management Unit requests Highways England integrates intelligent traffic management systems into the design of the junction improvements, with monitoring via agency control centres such as Highways England's Regional Control and Kent County Council Highways Management Centre. The Traffic Management Unit also suggests that civil traffic based enforcement should be included in Technological Traffic Management.

Many stakeholders had scheme wide concerns or suggestions relating to the provision of non-motorised users, including:

- A safety barrier should be installed on the A2 eastbound between Marlin Cross and Cobham as it is next to a national cycle route and currently very dangerous (Cycling UK);
- Pedestrian and cycling facilities should be upgraded during these works. Highways England should be working with Ebbsfleet Development Corporation and the local authorities to ensure routes are well connected (Kent County Council, HS1);
- Sustrans routes 1 and 177 pass through the centre of junctions and should be improved to ensure they are safe (HS1);

- Non-motorised user routes should be separated from roads to improve safety. If this cannot be done separate lanes must be wide enough for both pedestrians and cyclists to use them safely, especially on roundabouts (CPRE Kent);
- Must improve public transport links such as local bus service, fast-track buses, train services and walking/cycling provisions to help make shift towards local public transport in the area (Gravesham Borough Council); and
- Add a bridleway from end of Bean Lane westwards to Wood Lane (The British Horse Society).

#### 4.3.4 Environment

A few stakeholders, including Southfleet Parish Council, Kent Wildlife Trust, Historic England and CPRE Kent comment on the need for mitigation both during construction works, and for the scheme as a whole. Southfleet Parish Council specifically requests controls for dust, noise, and artificial light. CPRE Kent raises concerns that the air quality assessment does not acknowledge that the area already exceeds the Ambient Air Quality standard set by the government.

General mitigation measures suggested by stakeholders include protective screens, appropriate hard and soft landscaping and tree planting. Historic England comments that when considering mitigation measures, it is not always appropriate to block the view of infrastructure from heritage sites with the use of soft landscaping. They say that consideration should be given as to whether the unobstructed view is part of the significance of the setting when mitigating.

Natural England and Kent Wildlife Trust request that further assessment is conducted and mitigation considered for the following:

- Indirect and direct impact on woodland;
- Habitats along route; and
- Protected species surveys.

Kent Wildlife Trust requests that the proposed scheme should aim to enhance, or at least maintain current biodiversity.

The Environment Agency comments that the site for the proposed scheme lies within source protection zone (SPZ) 1. They are keen to discuss the drainage proposals for the new scheme and the opportunity to renew or upgrade existing facilities. The Environment Agency also requests consideration of the following brownfield sites:

- A historic petrol filling station at Old Road, Bean Triangle;
- A car wash at the Old Road on the Bean triangle;
- Adjacent scrapyards also at Old Road, of which little is known on impacts to the environment; and

- An old petrol filling station at the Ebbsfleet junction (should have been appropriately decommissioned as part of previous works).

Historic England comments that harm to heritage sites has been largely avoided in the proposals, and agree with the assessment that the impact on Darenth Wood will be minor. Kent County Council also acknowledges the plans to minimise the impact on Darenth Wood. However, Historic England does mention that there may be archaeological remains in the area that have yet to be discovered. These may be uncovered during construction work, or construction may cause changes to the conditions in which archeologic remains are preserved. They also mention the likelihood that a Roman temple of archaeological significance is preserved below some road in the area.

Historic England recommends considering the NPPF and its stance to conservation. Dartford Borough Council recommends investigation for archaeological remains prior to detailed design at both junctions.

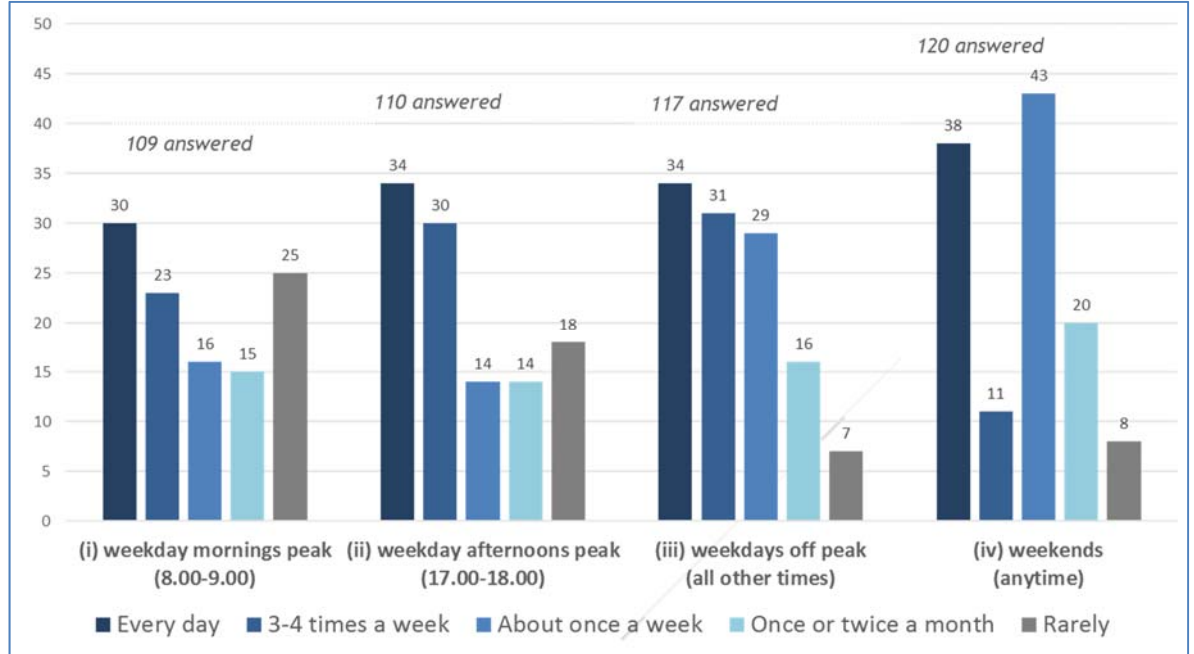
Kent County Council provides detailed comment on the Environmental Assessment Report and request an expansion of the study area, and further assessment of specific items.



# 5 Response analysis – Bean junction

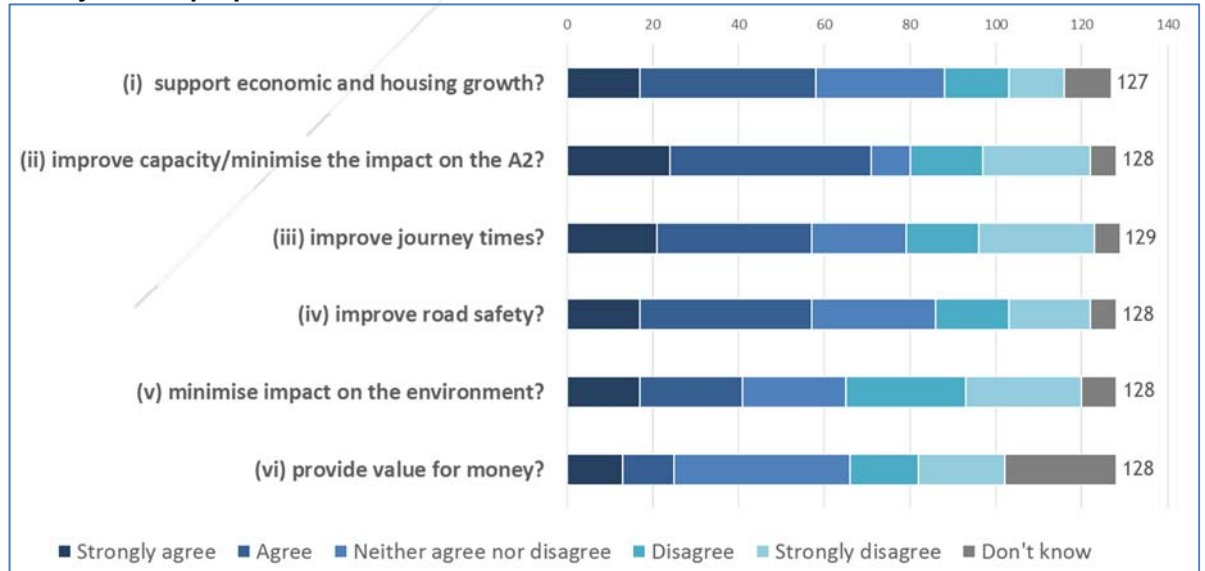
## 5.1 Current usage of Bean junction

**Fig. 8 Count of responses to Question 2: “How often do you currently use Bean junction?”**

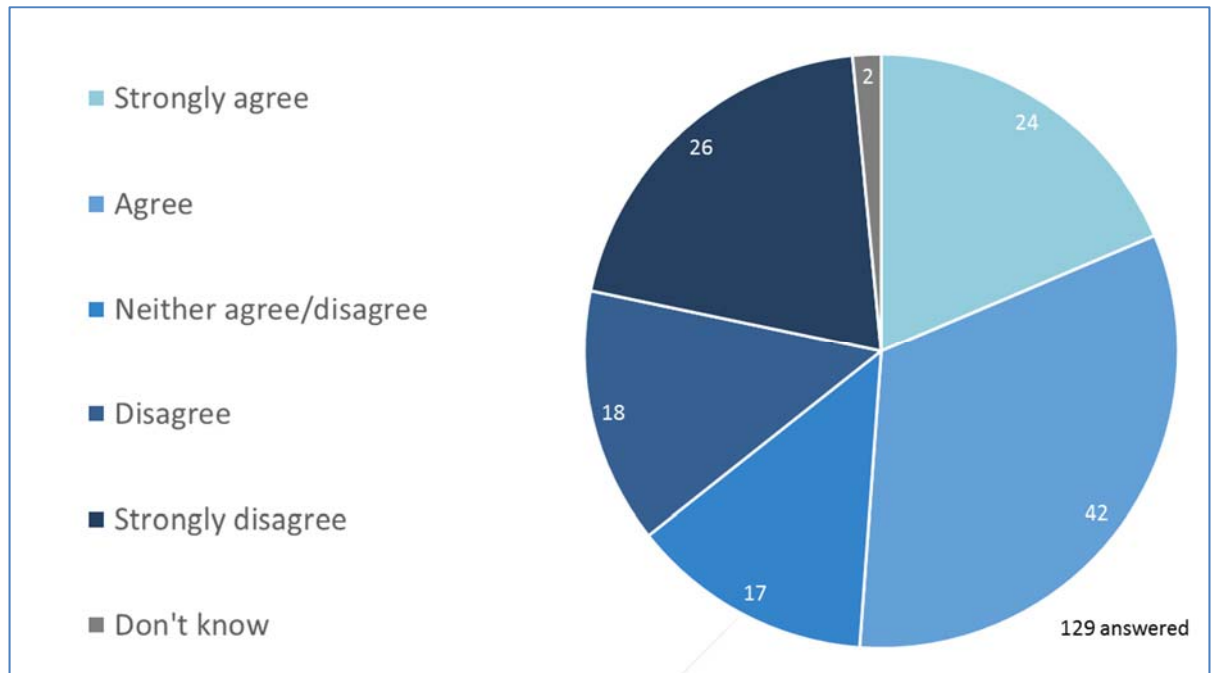


## 5.2 Opinions on the proposed improvements at Bean junction

**Fig. 9 Count of responses to Question 3a: To what extent do you agree or disagree that the Bean junction proposal will...**



**Fig. 10 Count of responses to Question 4a: “Overall to what extent do you agree with the proposed option for Bean junction?”**



### 5.3 Summary of issues around Bean junction

In addition to the closed questions detailed in sections 5.1 and 5.2, respondents were given the opportunity to answer three open questions about the proposed improvements for Bean junction. The responses to these questions have been analysed together and a summary presented by theme. The table below shows the number of responses per question.

**Table 3. Count of responses to questions 3b, 4b, and 5 about Bean junction improvement**

Question number	Open question text	Number of responses
3b	(To what extent do you agree or disagree that the Bean junction proposal will achieve the following objectives?) Please provide details to illustrate your answers	96
4b	(Overall to what extent do you agree with the proposed option for Bean junction?) Please provide details to illustrate your answer.	130
5	Are there any local issues that you feel we should be aware of in developing our proposals around the Bean junction? Please provide details to illustrate your answers.	89

In addition to the responses to these specific questions detailed above, the summary below includes related comments from respondents who did not follow the questionnaire format.

### 5.3.1 Need case

The majority of respondents recognise a need for improvement at Bean junction, sometimes referring to their current experience of using the roundabout or to the expected increase in traffic. Many stress the importance of catering to the future traffic volumes rather than implementing a short-term solution.

When commenting on the current situation many respondents complain that local residents have no way to avoid the Bluewater traffic, meaning short journeys can take hours and long alternative routes can inflate their fuel costs. Some respondents say that driver behaviour causes many of the problems experienced at Bean as drivers become frustrated by the delays or confused by the unfamiliar layout.

The majority of respondents commenting on the need case specifically mention the Christmas period, stating that this is the most congested period because of Bluewater and must be addressed by the scheme.

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*“...at seasonal peaks, e.g. Christmas when a simple 5-minute journey can take more than an hour because of Bluewater traffic” - User ID 53*

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Some say that any change must be better than the current situation even if they do not think that the proposed Option 5 is the most suitable option; while many others feel strongly that the wrong plan could make things worse.

A few respondents question the need for junction improvements at Bean giving the following reasons:

- The proposed Ebbsfleet Garden City will be focused on public transport and pedestrians/cyclists rather than cars;
- They think there are no employment prospects in area currently as they believe Swanscombe Theme Park has not yet submitted planning application;
- It would be better to refrain from building further housing or Swanscombe Theme Park in the area; and
- Local people do not want the roads altered to accommodate large developments such as Ebbsfleet Garden City and Swanscombe Theme Park.

### 5.3.2 General support and opposition for Bean Option 5

Some respondents share their support for the proposed Option 5 or for specific aspects of it. Several feel that the new bridge over the A2 is much needed and will ease congestion for the junction area and that the enlargement of the junction will create more capacity and therefore ease congestion.

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*“The proposed layout fits in well with the existing land usage. The only losses are the few houses next to the enlarged roundabout at the Bean junction. Considering the scale of the improvements, this is a small price to pay” – User ID 14*

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One respondent supports the proposed Option 5 as long as the Ebbsfleet Garden City exit/entry onto A296 east of B255 goes ahead as currently proposed.

However, some respondents feel that the lower cost is not a good enough reason to progress Option 5, stating that cost-saving decisions have previously resulted in lack of results. They think that a money-saving priority has led to more suitable options being dismissed and that Option 5 is not the best option.

Many feel that Option 5 would only alleviate issues in the short term, and will quickly become overwhelmed by the expected traffic volumes as it does not drastically reorganise traffic flows and remains complicated.

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*“It’s badly thought out, just adding bits to try to ease possible congestion, rather than looking at a total rebuild which is what is needed” – User ID 86*

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For this reason, some respondents do not think the improvements that would be achieved by Option 5 warrant the loss of Ightham Cottages and Spirits Rest Horse Sanctuary.

Some say that they can foresee local roads becoming clogged by drivers seeking alternative routes as a result of the proposed Option 5. They feel that this will affect the quality of life for residents by compromising the village feel of Bean and increasing stress to daily life. They point out that journeys between schools and residential areas during ‘school run’ will be affected as many have to cross the A2 getting between Greenhithe and Bean.

### **5.3.3 Affected properties and land take**

#### **Ightham Cottages**

The impact on Ightham Cottages is a contentious issue amongst respondents, with many voicing their strong opposition to the removal of the cottages and of Spirits Rest Horse Sanctuary as part of the Proposed Option 5. They feel that this should be treated as an absolute last-resort, and that Highways England has not pursued alternatives fully.

Some feel that Highways England is seeking to save costs by knocking down Ightham Cottages rather than finding alternatives such as Option 3. Another says that it seems that it may be easier for Highways England to move residents away from this specific area than mitigate against the air quality impact of the scheme on anyone living so close.

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*“They have been there for a long time and it seems wrong to bulldoze them just so shoppers can get to Bluewater easier.” User ID 65*

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Another questions the priorities in place, arguing that people’s quality of life should be seen as more important than the ancient woods. They argue that Darenth Wood is a common fly tipping area and is therefore not well looked after anyway, making it less valuable.

Some feel that because Option 3 only proposes to remove three homes rather than eleven, it should be progressed as the preferred option and adapted where necessary to bring down the cost.

Some discuss the best way to handle the compensation and assistance offered to residents of Ightham Cottages, should Option 5 go ahead as proposed. They say that offering 10% over market price will not be enough to guarantee these residents equivalent housing nearby as there isn't enough around. Some respondents stress the importance of handling compensation efficiently and fairly, referring to the bad experience local communities had with HS1 regarding Compulsory Purchase Orders and compensation.

Some suggest that Highways England and Ebbsfleet Development Corporation should provide these residents with equivalent housing nearby, possibly some of the new properties that are being built.

Several other respondents highlight the complexity of moving an animal sanctuary and say that the owners must be given plenty of prior warning and provided with all the help possible to move the animals. They also emphasise the importance of housing the manager on site with the animals when relocating the sanctuary.

Some say that the loss of eleven houses is unfortunate but reasonable given the scale and urgency of improvements.

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*"The houses immediately around the 2 Bean gyratory roundabouts will be massively affected and I sympathise massively with their predicament. However, we MUST upgrade" – User 47*

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### **Other affected property**

One respondent states that the road must not come any closer to Hope Cottages than it is now, as it would then affect residents' ability to access their home or to leave and join the road easily and remove their parking space.

Several people refer to the Kingsferry bus and coach park, saying that this should be retained as it provides alternative methods of travelling to London and nearby towns such as Dartford, as well as schools, shops and other services. Those who comment on this say that removing it may add demand to the junction.

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*"The removal of the bus/coach stop on Bean Lane would impact on the accessibility of residents of Bean and the wider area to access the Kingsferry coach service to London and a number of local buses in order to access schools, shopping and services in nearby towns such as Dartford" - User ID 61*

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Another respondent refers to a specific village sewer located in a field at the back of Beacon Drive which they say is sometimes used as a contractor's compound during roadworks. They say that if it needs to be used Highways England must contact Thames Water about impacts on this and provide a contact name.

### **5.3.4 Layout and design - Traffic lights**

The majority of respondents who comment on the traffic lights proposed at Bean junction feel very strongly that they will make the situation worse than it is currently.

Many of them refer to other nearby junctions using traffic lights which respondents feel are not successful. The specific junctions that they give as examples are:

- A2/M25 junction;
- Bluebell Hill (A229/M20);
- M25/Thurrock junction;
- M25 J1a (Dartford Crossing); and
- Princes Road Interchange (A296/A225/M25).

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*You only need to look at the roundabouts (which are traffic light controlled) at J1a of the M25 and the traffic problems there to see what I mean” – User ID 65*

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Most people who oppose the proposed signalisation of the Bean roundabout say that the volume of traffic expected to use the roundabout cannot be successfully controlled by traffic lights. They say that holding cars at red lights will cause tailbacks onto the A2 and clog up local roads, including routes to the hospital.

Some respondents explain that Bluewater traffic frequently blocks access to the roundabout for local residents, preventing them from easily getting in or out of the village. These respondents do not think that traffic lights will help the situation.

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*“For residents trying to enter Bean from the bean roundabout, they continually get stuck going around the roundabout by traffic backed up coming up the slip road off the A2 trying to get to Bluewater, this will not be solved by putting traffic lights in” – User ID 45*

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Comments opposing the traffic lights are often linked to air quality concerns, further discussed in 4.3.5 of this report. They question the local impact of cars being held at red lights whilst producing air pollution.

Respondents suggest that the roundabouts should be free-flowing instead of signalised, with roads and junctions widened where possible to increase capacity without stifling movement.

There are however a number of respondents who agree with the proposed traffic lights, saying that it would help drivers from Bean access the roundabout without having to force their way across the more dominant traffic flows that go between the A2 and Bluewater.

### **5.3.5 Layout and design - Interaction with other infrastructure**

Many of the issues that respondents raise relate to the high levels of development in the area, with specific reference to proposals for Ebbsfleet Garden City, Swanscombe Theme Park, the Eastern Quarry, Lower Thames Crossing as well as existing infrastructure and destination points such as Bluewater, Darent Valley Hospital, the Dartford Crossing, the M25 and the A2 itself.

## Bluewater Shopping Centre

Many respondents feel that Bluewater creates the current problems at Bean and that there was a lack of planning and investment when the shopping centre was first built. They also feel that not enough has been done since then to rectify the situation, with cheaper proposals being progressed rather than effective proposals.

Respondents often suggest that the Bluewater traffic should be separated from local and hospital traffic and that the small bridges, roads and roundabouts are not suitable for such large volumes of non-local traffic.

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*“Bluewater traffic needs uninterrupted access and egress direct from and onto the A2. Leave the local routes out of it” - User ID 100007*

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When discussing Bluewater, many respondents explain that the peak travel times in the area are not the same as those used by Highways England to design the proposals put forward. They highlight problems at weekends often causing delays, long journey times and gridlock, and state that the Christmas period is completely unworkable. Respondents feel strongly that Highways England has not taken this into account, and therefore the proposed Option 5 would not meet demand for a significant portion of the year.

## The Dartford Crossing and proposed Lower Thames Crossing

Some respondents say that if there is any disruption to the Dartford Crossing, drivers trying to take an alternative route to the M25 can overload Bean junction and the local roads.

Some of these people feel that fixing issues at the Dartford Crossing is higher priority than the junction improvements, stating that the problems there are more severe and unless addressed first, there would be little improvement possible at Bean junction.

Respondents feel that the need for another river crossing is urgent and refer to the proposed Lower Thames Crossing. Some express frustration over a lack of progress with the Lower Thames Crossing and raise concern that, due to delays in decision making, there is a high likelihood of incompatibility between proposed plans.

## Ebbsfleet Garden City

Many respondents suggest that Ebbsfleet Garden City may increase demand at Bean junction depending on the final decisions of the Ebbsfleet Development Corporation regarding access to the area.

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*“Ebbsfleet Development Corporation have stated that there will not be access to the A2 from Ebbsfleet Garden City other than via the Ebbsfleet junction. However, if they change their minds then there could also be that additional traffic to take into account if it doesn't already try to do so via London Road and Mounts Road in Greenhithe” – User ID 64*

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## Swanscombe Theme Park

One of the most common issues that respondents raise is the exclusion of the proposed Swanscombe Theme Park from traffic forecasting when designing the options for Bean junction.

The majority of respondents who comment on this feel that it is unacceptable that this development has not been considered, and are concerned that this would lead to further problems at the junction. Some suggest that if the theme park proposals do move forward, the proposed Option 5 would need to be completely redesigned.

## Darenth Valley Hospital

Respondents highlight the importance of enabling a clear and free-flowing route to and from Darenth Valley Hospital. Many raise concerns that emergency service vehicles and others visiting the hospital have to take the same route as Bluewater shoppers and local drivers.

They suggest a separate lane for separating all hospital traffic or just emergency vehicles from the Bluewater traffic completely.

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*“This road from new roundabout\junction needs duelling through to St James Lane\Hospital (Darenth) with special lanes for ambulances, etc. without this improvement it is wholly cosmetic” – User ID 100049*

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## The A2

Several respondents argue that the A2 itself does not have capacity for the forecast traffic increase and therefore Bean junction would still come to a gridlock despite any changes that are made during this upgrade. Others think that the proposed Option 5 would instead have a negative effect on the A2, causing tailbacks and delays when the roundabouts become congested.

### 5.3.6 Layout and design - Removal of A2 access from B255 via Roman Road

Many respondents question the removal of the slip road from the B255 onto Roman Road. They are concerned about the volume of traffic that would be directed to the northern roundabout at Bean junction as a result of this.

Respondents argue that creating only one access route to Bluewater, and forcing all A2-bound Bluewater traffic into the traffic light controlled roundabouts would create more severe congestion than is currently seen at the junction.

Respondents suggest that despite the closure of this slip road, some drivers would still use Roman Road as an access route to the A2 by turning back on themselves at Ightham roundabout to the A296 roundabout, especially if Ightham roundabout is congested. They say that this could potentially cause tailbacks to the hospital.

Others point out that closing this slip road also reduces the B255 past Bluewater from four lanes down to two and raise concern that this would likely cause increased congestion,



stating that the current four lanes already struggle to cope with peak Bluewater traffic and that the increased volumes expected will not move through any less.

Several respondents suggest that instead of closing this slip road, it should be kept and widened. Another suggests making the road one-way, with no parking permitted.

### **5.3.7 Layout and design - New slip road**

A number of respondents comment positively on the new slip road, saying that it would be a quicker route onto the A2 than Roman Road.

Others raise strong safety concerns, arguing that because drivers can still use Roman Road to access the A2 there would essentially be two slip roads merging within very close proximity to each other. They also feel that the short length and narrow lanes of the proposed new slip road combined with the speed of traffic already on the A2 mean that it would be very dangerous in practice.

To combat this, one respondent suggests blocking access to the A2 from Roman Road to make the new slip road the only road to merge onto this part of the A2.

Some point out that the roundabout is often very confusing and adding another slip road directly onto it will exacerbate this.

### **5.3.8 Layout and design – Non-motorised users**

Respondents report that driver behaviour often endangers pedestrians and cyclists as they currently ignore red lights and pedestrian crossings on the Bean Bridge, forcing cyclists and pedestrians to wait long periods of time in order to cross safely.

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*“Currently, many cars ignore the traffic lights on Bean bridge and go on red causing near fatalities.” User ID 34*

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Respondents make the following suggestions:

- Improve and signalise footpaths between Bluewater, Greenhithe and Bean;
- The steep incline of the cycleway adjacent to Watling Street should be levelled;
- The quality of pavements, access and protection for NMUs should be improved;
- Maintain/improve National Cycle Route 1;
- Increase height of wind barriers on bridges for cyclists; and
- Incorporate a segregated cycle lane and footway into the design of both bridges over the A2 to join up with the current shared use footway on Bean Lane.

Many respondents say that the pedestrian and cycle routes are not clear in the proposals, and raise concern that this means this provision will only be considered as an afterthought. Some others feel that the paths shown in the proposals are incredibly dangerous.

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*“The pedestrian route shown from Bean to Bluewater is so hazardous I don't even know where to begin. It looks like it goes across the centre of the Ightham roundabout so either pedestrians are expected to play chicken, or there will have to be pedestrian crossings. If there are then these will also hamper the traffic and add to delays. Classes from Bean Primary School walk down to Bluewater for different events and this will prevent them from doing so as the risk would be immense.” – User ID 64*

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Some reference the Government and Highways England's own strategies to invest in cycling and walking as viable means of transport.

### **5.3.9 Layout and design - Signage**

Many respondents highlight signage as a significant issue at the Bean junction due to its complicated layout (both current and proposed) and the proportion of drivers that are not local to the area and therefore reliant on signage.

Those commenting on signage are concerned about the effect on traffic flow and safety if the signage is not clear and accurate. They refer to current unclear signs causing last minute lane changes and accidents, especially involving lorries and HGVs on the westbound slip road.

Respondents request that new signage is unambiguous and suggest that it should not be reliant on road markings as they will not always be visible and will wear away quickly.

### **5.3.10 Layout and design - Removal of hard shoulder**

Some respondents object to the removal of the hard shoulder where the new slip road joins the A2, raising concerns over lack of protection for broken down vehicles at a point where drivers tend to speed up. They also argue that removal of the hard shoulder here could limit emergency vehicle ability to reach broken down vehicles or accidents, as they cannot use it to drive past traffic jams that are in the way.

### **5.3.11 Layout and design - Other safety concerns**

In addition to concerns surrounding signage, removal of the hard shoulder and risks to non-motorised users, some respondents raise a range of other areas where they feel safety may be compromised:

- The increasing volumes of traffic are dangerous and therefore any scheme increasing capacity and adding to the number of cars will increase risk;
- If the proposed Option 5 did cause tailbacks onto the A2, there would be an increased likelihood of accidents as a result;
- The hill gradient when entering or exiting the junction at certain times causes vision to be affected by low sun affecting safety;
- Clements Lane can be dangerous between Bean and Greenhithe due to lack of road length between two sets of traffic lights when drivers are required to change lanes.

A few feel that accidents will be reduced overall as a result of the proposals, but do not add further detail to their opinion.

### 5.3.12 Layout and design - Additional suggestions

Some respondents do not oppose Option 5, but make suggestions that could be implemented alongside simultaneously to improve it or solve other problems. These suggestions include:

- Ensuring an equal number of lanes either side of the roundabout to prevent two or more lanes of traffic trying to leave the roundabout through a single lane exit;
- Discouraging HGVs from leaving the A2 and using local roads through Bean as an alternative route. They also suggest enforcing HGVs to use only the leftmost lane to avoid them blocking multiple lanes on this busy stretch of road;
- Changing the A2 itself by widening it, introducing speed management along the stretch where the slip roads join and leave, and having protected merging lanes on the A2 to avoid collisions;
- Constructing a separate, un-signalised lane on the westbound A2 off slip dedicated for Bean access;
- Including hatched boxes enforced by cameras on the junction roundabouts to prevent them becoming blocked by dominant flows; and
- Removing access to the A2 from Roman Road altogether to prevent it becoming a problematic alternative route for those looking to avoid the main roundabout and new slip road.

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*“Traffic heading towards Bluewater from the existing bridge. Currently cars use both lanes on the bridge and push into each other to get across it into one lane to get into Bluewater, this is one of the causes of current traffic levels, there needs to be equal lanes on either side of the roundabout to alleviate this issue” – User ID 45*

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Many additional suggestions relate to public transport. These include:

- Improving bus routes by incorporating ‘fast-track’ bus lanes around the junction and additional bus stops either side of the roundabouts to strengthen links between Bean, Bluewater and Greenhithe;
- Providing secure parking for Kingsferry coach service, which encourages commuting via public transport reducing reliance on cars for locals during midweek peak times.

Traffic light suggestions include:

- Controlling the proposed traffic lights with sensors to avoid holding queues up needlessly;

- Putting the proposed Bean roundabout traffic lights on a different entrance/exit, in order to limit its effect on the A2 westbound off slip as it enters the roundabout.

### 5.3.13 Environment

Many respondents commenting on the proposed Option 5 feel that there would be a significant detrimental impact on the environment of the immediate local area from traffic pollution (both air quality and noise).

#### Air quality

Of the respondents who express concern about air quality, several highlight the current high levels of pollution around the Bean junction.

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*“Currently common knowledge that area is subject to constant monitoring because of excessively high levels” – User ID 100047*

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A few respondents refer to the forecast increase in traffic levels and argue that the proposals would not address air pollution. They think the proposed Option 5 would at best merely prevent the situation from worsening or they think it would instead exacerbate the current problem by increasing the junction’s capacity and therefore the volumes of polluting traffic in the area.

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*“I don’t see how this will make a difference to air quality or traffic levels if induced demand is encouraged” – User ID: 5*

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Many respondents feel strongly that the proposed traffic lights in particular would further damage air quality by creating queues of stationary traffic which would produce fumes while idle. They often suggest using signalisation controlled by traffic flow sensors to alleviate this affect.

Some respondents also stress the importance of mitigating the potential air quality impacts and suggest planting trees around the junction and village of Bean whilst monitoring air quality closely.

#### Noise

Some local residents say that the current noise impact from the A2 Bean junction and its slip roads is already unacceptable. These respondents request mitigation measures to reduce the noise around the Bean junction such as noise-reducing road surfacing, landscaping, noise barriers and planting trees to address the issue.

A respondent raises that the closure of the B255/A296 slip link to the A2 would bring both noise and air pollution nearer to Bean residents as HGVs will need to enter and exit the A2 closer to residential areas.

### **Ancient woodland/heritage site**

Some respondents suggest that even though the proposed Option 5 does not require land-take of any ancient woodland, it could still have a significant indirect impact due to increase in air pollution in the Bean triangle area.

### **General environment**

One respondent expresses concern that the proposals would increase flood risk to local housing as the Bean junction area is marsh land.

#### **5.3.14 Alternatives**

Many respondents offer suggestions for alternative options to those included in the consultation, including the following:

- Instead of traffic lights, junctions should be free-flowing with wider slipways or if not possible, flyovers and underpasses should be constructed over or under the A2;
- Highways England should retain access to Roman Road from the B255 as an access route to the A2, making changes to increase its capacity. They suggest widening to two or three lanes to allow for Bluewater traffic and Dartford traffic and widening the on-slip by using land east of Merry Chest Café;
- Retain access to Roman Road but rather than have it join Watling Street at Bean junction, extend it to run parallel to the A2 all the way to the Ebbsfleet junction;
- Local traffic should be separated from the Bluewater and A2 traffic by constructing a new, un-signalised route from Bean to Greenhithe that does not join the roundabouts at any point;
- A new road from Bluewater directly to Ebbsfleet junction should be tunnelled under the Eastern Quarry;
- Instead of building a second bridge, Highways England should knock down the existing northbound bridge and build a completely new structure as this would allow for widening of the A2; and
- The roundabout system should be replaced with traffic-light controlled box junctions instead.

Many respondents feel that the best option would be a total rebuild of the junction.

### **Option 3**

Some respondents argue that Option 3 is a more suitable solution than Option 5 and challenge the reasons for its rejection.

They suggest that the design could be adjusted and easily avoid impact on the ancient woodland.

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*“Where you say you will take half a hectare of ancient woodland, I think you should relook at this and if you move the design of the slip road slightly you could miss this woodland altogether.” – User ID 100060*

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Others say that the cost may have been overestimated and could be reduced through adjustments to the design.

Respondents who support Option 3 believe that due to the more significant changes and the simplified layout it would accommodate future growth more easily, reducing the level of investment needed in the future.

## 5.4 Stakeholder responses

### 5.4.1 Need case

Bluewater, Bean Residents Association, CBRE (on behalf of Land Securities Eastern Quarry Ltd), Ebbsfleet Investment General Partners (EIGP), Forestrall Timber & Fencing Merchants, London Resort Company Holdings (LRCH), all comment on the current strain on the Bean junction and stressing that there is already an urgent need case for improvements.

Many stakeholders stress that not only are current congestion issues in need of a solution, the level of development in the area, the expected traffic volumes and the level of potential congestion mean that the works are needed urgently to provide stable and efficient infrastructure to support this growth (Bluewater, Dartford Borough Council, Forestall Timber, Bean Residents Association).

Dartford Borough Council asks that the plans be brought forward and sped up wherever possible.

However, some stakeholders stress that although there is indeed an urgent need for improvements, the right decisions must be made and therefore cannot be rushed. CPRE Kent says that previous mistakes should not be repeated and Bean Residents Association says that they will not ‘rubber stamp’ the proposals just because of this urgency.

### 5.4.2 General support and opposition to the proposed Option 5

#### Opposition

Bean Parish Council expresses the Council’s opposition to the proposed Option 5, suggesting that it would make the situation worse for locals rather than help, specifically referencing the current difficulty when leaving the Bean Village via the bridge at busy times, which they believe would be exacerbated.

Bluewater, Ebbsfleet Investment General Partners (EIGP) and Land Securities Eastern Quarry think while it could make some slight improvements to the current situation, they do not agree that it is the best available choice and argue that other options that would provide longer-term improvement, more capacity and support growth.

CPRE Kent opposes the complex layout, saying that there are too many roundabouts.

Gravesham Borough Council disagrees with the proposed Option 5 because they feel that it does not address the current problem of vehicles on the A2 westbound weaving between lanes during morning peak times that they suggest is caused by the reduction to three lanes through Bean junction.

Bean Residents Association strongly opposes Option 5 and feels that it is unsuitable yet is being progressed because it is a cheaper option than others. The association argues that the original off-site roads package agreed with Bluewater at the time of construction was insufficient, and that despite the inadequacies becoming obvious once the shopping centre was operational, no solution since has been successful due to a continued lack of investment.

They feel that the cheapest options have always been implemented rather than effective ones, and that Option 5 would be another instance of this. They stress that, if the best option cannot be delivered within the allocated budget, the project team should seek an increase in the budget.

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*“Having seen the previous lowest cost design fail, we had expected your 2016/17 Options to provide lasting solutions. Instead, at Stage 1, you have already rejected six of them, leaving only Option 5, based principally on cost... If it needs more money to get it right, then additional budget should be sought. The scheme is essential to support Growth” – Bean Residents Association*

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Bean Residents Association also says that the junction should not be allowed to come any closer to Hope Cottages as agreed in the Bluewater off-site package. This would affect residents' ability to access and park at the cottages.

### **Support**

Some stakeholders share their support for the proposed Option 5, either due to the general need case or their approval of a specific aspect of the design:

- Kent County Council recognises that Option 5 proposes a ‘significantly larger junction footprint and associated replacement roundabout’, although do raise concerns about the operation of the proposed design;
- Cycling UK believes Option 5 would alleviate capacity problems, but for the short term;
- Tarmac Ltd supports any improvement to journey times that can be achieved;
- The Ebbsfleet Development Corporation specifically supports the eastbound off-slip being widened to two lanes; and
- The Kent Police Traffic Management Unit supports the additional bridge and slip roads.

London Resort Company Holdings frames their support by saying whilst they agree with any proposals that will improve journey times, they have some concerns regarding the

assessments made by Highways England when designing Option 5 that need to be addressed.

### **5.4.3 Affected properties/planning/permissions**

Several stakeholders had comments specifically relating to the impact of the scheme on Ightham Cottages. Some request that any adjustments or alternatives that could avoid this impact are made if they become possible as plans are developed (Forestrall Timber & Fencing Merchants, Bluewater, Land Securities Eastern Quarry Ltd).

However, some feel more strongly about that matter and argue that the removal of these properties should be an absolute last resort, and that Highways England has not made enough effort to avoid this impact.

Bean Residents Association points to the fact that none of the rejected options would have an impact on Ightham Cottages, and that five of the rejected options avoided any demolition of homes at all. They question whether Highways England will be able to prove the justification for Compulsory Purchase Orders given this.

The Association does not believe that many people are aware of the impact on the scheme on people's property and on the Spirits Rest Animal Sanctuary.

Bean Parish Council queries whether it is reasonable to award the woodland higher protection than 11 homes and an animal sanctuary. CPRE Kent and Spirits Rest Animal Sanctuary both emphasise the role of the sanctuary in the area, explaining that it is not only a home but also the only rescue centre for horses and wildlife in Dartford and therefore demolition of it is a loss of an important local amenity.

Both Bean Parish Council and Bean Residents Association suggest that as Ebbsfleet Development Corporation is developing so much of the local area, they should have a responsibility to help the displaced residents by contributing 11 suitable homes from the 15,000 new ones that they are building. They say that this is important because the compensation offer of market value plus 10% is not enough to guarantee residents an equivalent home nearby due to a shortage of similar properties in Bean.

Ebbsfleet Development Corporation says that they are committed to working with Highways England and developers to find solutions for residents when the acquisition of homes is completely unavoidable as they do agree with the overall scheme.

Dartford Borough Council says that while they find the acquisition of homes disappointing, they cannot support the alternative of a worsened environment for remaining residents. They ask that Highways England offers the residents full financial and non-financial support and consideration. The Council also asks to work with Highways England to find a suitable replacement site for the animal sanctuary.

Southfleet Parish Council emphasises the importance of efficiently resolving compensation cases for residents, referring to bad experiences that local communities had when HS1 acquired properties.

Some responses are specific to one of the Ightham Cottages in which a disabled resident lives. A relative of the resident and Dartford MP Gareth Johnson write to explain the specific requirements at hand, and highlight the large number of adaptations that have been made



to the house at Ightham Cottages in order to enable the resident to live there independently. They request that this case be given exceptional consideration as the standard compensation offer would not allow an equivalent home to be found. They say that a new home will need the same adaptations as the previous one and a garden for a service dog.

### **Other affected properties**

Some stakeholders refer to other properties that may be impacted. They make the following statements:

- The road must not come closer to Hope Cottages as agreed in the initial Bluewater offsite roads package, because this would impact access and residents parking (Bean Residents Association);
- Dartford Borough Council owns several Hope Cottages and would like clarification of the impact on them of the scheme;
- There may be an effect on High Speed 1 infrastructure from the Bean junction proposals. They request engagement to discuss access rights and infrastructure protection; and
- Tarmac Trading Ltd owns and operates an Import Terminal at the former Northfleet Works and have planning permission for further development. They ask that modelling and layout design account for the transport movements.

## **5.4.4 Layout and design**

### **Traffic Lights**

Bean Parish Council opposes the inclusion of traffic lights on Bean junction and believes it will cause tailbacks onto the A2, highlighting the knock-on safety implications if this should transpire. Kent County Council also raises concerns about traffic signal control, saying that they do not believe traffic lights will increase capacity, especially in the longer term.

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*“We have a number of concerns regarding the proposed use of traffic signal control on the roundabouts. In our experience converting roundabouts to traffic signal controlled gyratories does not increase the capacity, especially in the longer term. There is simply not the required available internal queueing capacity to cope with the increase in traffic volumes”*

*– Kent County Council*

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Kent Police Traffic Management queries whether traffic modelling used by Highway England to develop the proposals has properly considered peak traffic volumes to ensure that this would not be the case.

### **Interaction with Bluewater**

Several stakeholders, including Bean Residents Association, Kent County Council, Swanscombe and Greenhithe Council, Land Securities Eastern Quarry and Ebbsfleet

Investment General Partners, state that the data used for modelling and the design of Option 5 has not included Bluewater peaks as it was collected in June and July.

They argue that due to the intensity of these peaks and the lengths of the seasonal peak surrounding Christmas, this exclusion is inappropriate.

Bean Residents Association points out that 91% of Bluewater visitors arrive by car rather than public transport.

CPRE Kent and Gravesham Borough Council both mention the planned expansion of Bluewater, raising concern over the impact this will have on the junction. CPRE Kent says that when responding to Bluewater regarding their plans, they have pushed for them to properly consider the junction.

### **Interaction with the A2 and other roads**

Many stakeholders comment on the A2 and the impact Bean junction will have on traffic flow there, and vice versa.

Kent County Council and CPRE Kent both say that the A2 must be widened to increase capacity. CPRE Kent criticises the fact that this issue has not been mentioned in the proposals and say that without capacity being increased on the A2, the proposed Option 5 would not deliver the expected improvements at Bean junction.

Stakeholders raise concerns about the M25, the A227, and the A226/B255 junction. They stress that if changes to Bean junction did cause congestion on the A2, it would impact other roads such as the A227 as well as the narrow local lanes (Meopham Parish Council, Southfleet Parish Council).

Parsons Brinkerhoff highlights proposals for the A226/B255 junction and says that Highways England must consider how the changes at both nearby junctions will interact with each other.

Other infrastructure comments include:

- Swanscombe and Greenhithe Council says that more pressure should be applied to progress the Lower Thames Crossing.
- Bean Residents Association refers to the current plans for Ebbsfleet Garden City, and say that although there is no access point planned at Bean junction, if this changes there will be far higher demand than is catered for by the proposed Option 5.

### **Removal of A2 access from B255 via Roman Road**

Kent County Council and Bean Parish Council raise questions about the removal of the slip road onto Roman Road, with Kent County Council proposing that it should be retained to provide extra capacity.

Bean Parish Council says that they do not believe that this will improve congestion, rather that it will force all traffic to the signalised Ightham roundabout. They believe that drivers would then double back at Ightham roundabout to the A296 roundabout to access the A2

via Roman Road anyway, especially if there is congestion on the main junction. They point out that vehicles taking this route would have right of way over vehicles coming past the hospital at the A296 roundabout, and suggest that they will block the roundabout completely even if there were traffic lights installed there.

Dartford and Gravesham NHS Trust also raises concerns over hospital traffic, specifically that heading westbound towards the hospital from the B255. They request that the existing slip road be retained for unrestricted hospital traffic, but if necessary for it to be emergency access only.

Gravesham Borough Council also raises concerns over hospital traffic being caught in Bluewater traffic on the way to and from the hospital.

Bean Parish Council and Southfleet Parish Residents Association both raise doubts that the removal of the slip road would support the expected increase of traffic that the planned developments in the area will create.

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*“This part of the dual carriageway backs up already so to increase the traffic flow with traffic that would have been in the two lanes to be closed will cause a greater tailback. Add to this the ongoing development at St Clements Lakes and the possibility of the Paramount proposals and the resulting congestion will be colossal” – Bean Parish Council*

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Kent Police Traffic Management questions whether it will lead to congestion in Bean Lane roundabout, and states that they trust Highways England has considered this possibility.

Bean Residents Association writes that access to the road is vital for local use, and objects to all the traffic from Bluewater and local traffic being diverted to the main roundabout. They believe that widening the road to increase capacity is the best option, but they say that Highways England is unwilling to explore this option due to the higher cost of upgrading it.

They also discuss the closure of the additional lanes on the B255 that feed into the slip road, which runs past Bluewater exits carrying traffic from Greenhithe and the shopping centre. They say that this design ignores that current problems with regular traffic queuing in the area, instead creating a new pinch point for congestion.

### **New slip road**

Some stakeholders feel that the new slip road would have a detrimental effect on the A2, causing congestion and potentially accidents. They argue that because there would be two on-slips merging so near to each other there is a safety risk that is increased further by the narrow lanes (Bean Residents Association).

CPRE Kent feels that the new slip road would increase congestion to the area, and the change would soon have to be reversed resulting in the loss of property being fruitless. They go on to state that no proposal for a new east bound slip road should be supported.

### **Signage**

CPRE Kent reports that poor signage currently confuses non-local traffic such as shoppers, visitors and HGVs which creates a dangerous situation as vehicles change lanes at the last

minute. They say that Kent County Council and Bluewater are both due to contribute funds to addressing this problem during the current financial year.

### **Additional suggestions**

Kent County Council suggests incorporating smart motorway traffic management features to combat misuse of lanes by drivers. They highlight that having four large junctions so close together on a strategic road is uncommon, and that in this instance there is a particular problem with HGVs weaving between lanes as they navigate their way to the M25 past congested off-slips.

Forestrall Timber raises concerns for the business which is located on the 'Bean Triangle' where passing trade would be impacted by the closure of the slip road to Roman Road. They request that a sign is placed on the new route so people are still aware of their location.

### **5.4.5 Environment**

Dartford Borough Council, Natural England and Kent Wildlife Trust all acknowledge that Highways England has designed Option 5 to have a minimal effect on ancient woodlands and artefacts.

However, these stakeholders also raise concern that despite there being no direct impact on ancient woodland in the form of land-take, there may be indirect impact as a result of air pollution and request further assessment of this potential harm.

Natural England refers to the proximity of the proposed layout to Darenth Wood:

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*"The revised layout of the junction and the B255 road to the north of the A2 at Bean appears to bring the road within 200 metres of the western edge of Darenth Wood SSSI. Consequently, we would recommend that an assessment of the potential for impacts to the SSSI to result from air quality impacts associated with the scheme should be undertaken." –  
Natural England*

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Dartford Borough Council requests that Highways England undertakes a visual assessment to avoid having a detrimental effect on the setting of Darenth Wood.

Kent Wildlife Trust requests that Highways England fully mitigates any habitat loss or net loss of biodiversity, whilst taking opportunities to enhance habitats with landscaping.

Dartford Borough Council points to the Air Quality Management Area (AQMA) status of the Bean interchange and raises concern that the model Highways England has used to forecast air quality impact has underestimated peak traffic volumes and the resulting NO<sub>2</sub> levels that would have a detrimental impact on the environment surrounding Hope Cottages.

The Council requests that Highways England replaces the correct air quality monitor that is currently in place at Ightham Cottages, and states that if an AQMA is created south of the Bean junction then Highways England will be required to mitigate this.

The Environment Agency refers to two specific brownfield sites located on the Bean Triangle; the historic petrol filling station and adjacent scrapyard. They say that little is known about the environmental impacts of these sites and ask that Highways England takes them into account.

#### **5.4.6 Alternatives to the proposed option 5**

CPRE Kent suggests that instead of adding the new slip road and signalling the junction, Highways England should propose a more free-flowing design, only installing smart traffic lights northbound on Bean Lane before the A296.

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*“Traffic heading south on Bean Lane and the B255 from Bluewater would each have their own lane. The traffic would if required filter across into another lane whilst crossing the A2.” –  
CPRE Kent*

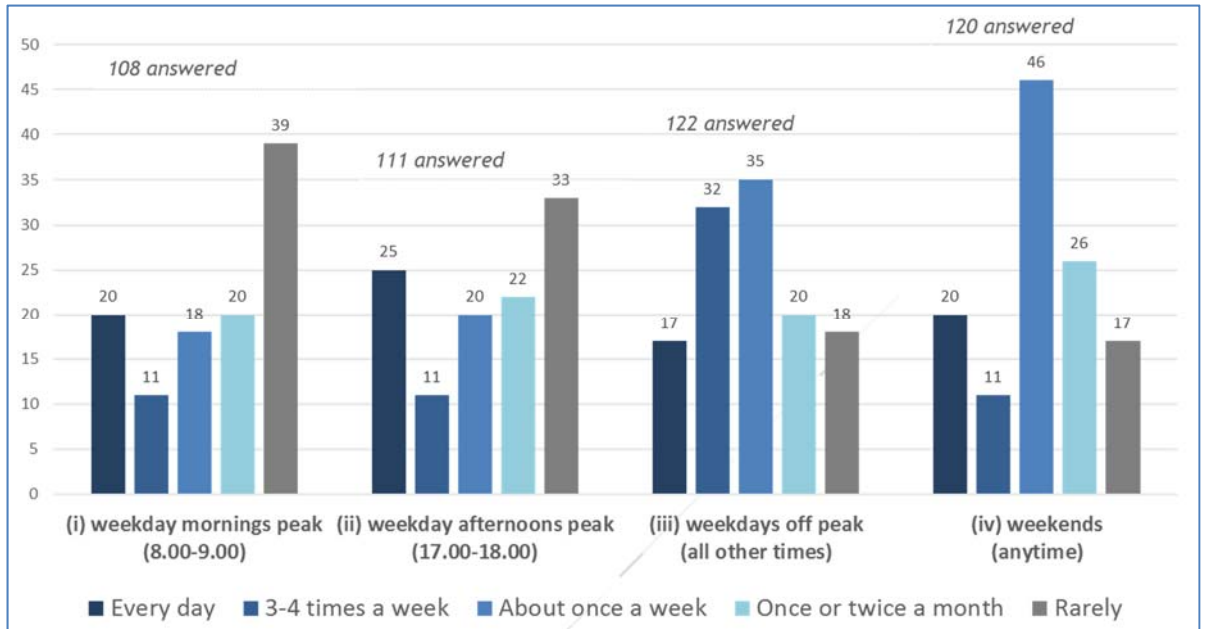
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Land Securities Eastern Quarry suggests adopting some elements from Option 3 into the proposed Option 5. They feel that the capacity of the slip roads south of the A2 in Option 3 is increased as they are straighter and therefore reduce the need for vehicles to slow down as much as they do currently. They say this would also prevent large vehicles from overrunning the centre line as they follow the sharp curve of the on slip that is retained in the plans or Option 5.

## 6 Response analysis – Ebbsfleet junction

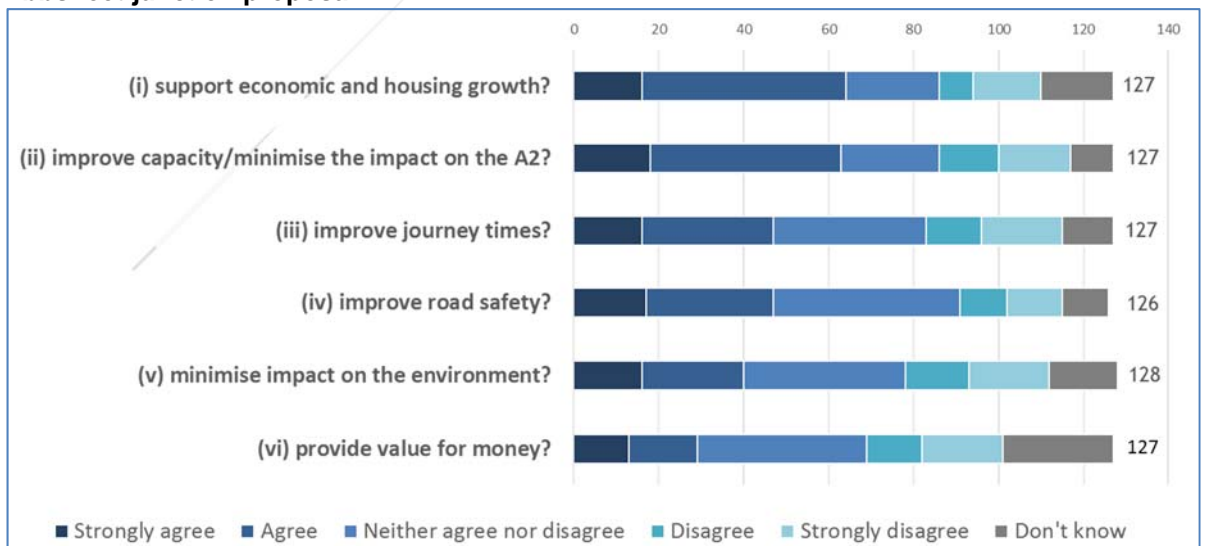
### 6.1 Usage of junction

**Fig. 11** Count of responses to Question 6 “How often do you currently use the Ebbsfleet junction?”

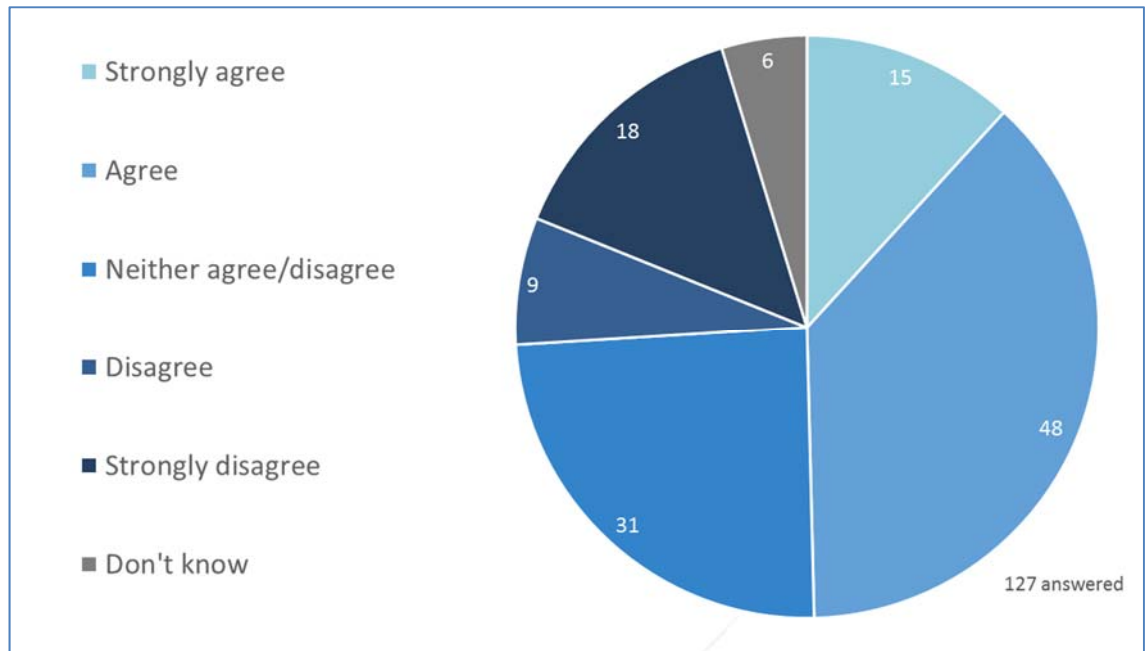


### 6.2 Opinions on the proposed improvements

**Fig. 12** Count of responses to Question 7a. To what extent do you agree or disagree that the Ebbsfleet junction proposal will...?”



**Fig. 13 Count of responses to Question 8a: “Overall to what extent do you agree with the proposed option for Ebbsfleet junction?”**



### 6.3 Summary of issues about Ebbsfleet junction

In addition to the closed questions detailed in sections 6.1 and 6.2, respondents were given the opportunity to answer 3 open questions about the proposed improvements for Ebbsfleet junction. The responses to these questions have been analysed together, and a summary presented by theme. The table below shows the number of responses per question.

**Table 4. Count of response to questions 7b, 8b, and 9 about Ebbsfleet junction improvement**

Question number	Open question text	Number of responses
7b	(To what extent do you agree or disagree that the Ebbsfleet junction proposal will achieve the following objectives?) – Please provide details to illustrate your answers	73
8b	(Overall to what extent do you agree with the proposed option for Ebbsfleet junction?) Please provide details to illustrate your answer.	129
9	Are there any local issues that you feel we should be aware of in developing our proposals around the Bean junction? Please provide details to illustrate your answers.	60

In addition to the responses to these specific questions detailed above, the summary below includes related comments from respondents who did not follow the questionnaire format.

### 6.3.1 Need case

In comparison with the Bean junction, respondents are much more varied in their opinion of the need case for improvements to Ebbsfleet junction.

Some feel that there are no changes needed to this junction and that it should be excluded from the scheme. These respondents say that it is not currently busy enough to warrant the proposed changes and that local people want the junction left as it is. Some others say that they do not personally use the junction and so are not sure that it needs improvement.

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*“It’s NOT needed and it will just cause abject misery for local people for years to come, but hey - you have millions of pounds to waste so what do you care” – User ID 37*

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Some respondents say that they do think the Ebbsfleet junction will need improvement in the future, although it is not yet affected by capacity issues. They refer to the large amount of housing development taking place in the area, as well as the Swanscombe Theme Park and Ebbsfleet Garden city.

Others share their opinion that changes are needed immediately at the Ebbsfleet junction and state the following reasons:

- The current layout is perceived as confusing which increases congestion;
- Evening rush hours are already problematic, often linked to London trains arriving at Ebbsfleet International station. They highlight that this will become worse with an increasing commuter population; and
- Changes need to be implemented now, ahead of proposed developments becoming operational.

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*“The existing junctions are not very congested at the moment, however with the planned development it seems wise to increase capacity at these junctions before the development is completed” – User ID 55*

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### 6.3.2 General support and opposition for Ebbsfleet Option 1b

#### Support

Some respondents support specific aspects of Option 1b such as the widening of the roundabout, more direct routes onto the A2, and the cost-effectiveness of remaining largely similar to the existing layout.

A few respondents state that they do support the proposed Option 1b overall but do not give reason for their support, while some others support the proposal saying that they are not sure if it would be effective, but prefer it more than the do-nothing option.



## Objections

Some respondents are concerned that there is not enough provision in the proposed Option 1b for the increase in vehicles that will accompany the new housing developments taking place.

Other respondents oppose any changes to the junction at all, saying that local people do not want the increased traffic or the housing development as it is a consequence of overspill from London's growth, and is not genuinely beneficial for the existing residents of Ebbsfleet.

Some oppose the proposed layout put forward in Option 1b, arguing that it is still overly complex and an opportunity to simplify has been missed. These respondents say it would be 'confusing' and is 'not a common-sense layout'.

However, several respondents neither support nor oppose the proposed Option 1b, saying that they cannot see much difference to the existing layout, especially compared to the extent of the changes proposed for the Bean junction.

Others comment that they do not know if the proposed option would be successful, saying that as they do not have access to data or traffic modelling tools they have to hope that Highways England has made sound assessments and judgements.

### 6.3.3 Layout and design – Traffic lights

Almost all the respondents who comment on the proposed traffic lights at the Ebbsfleet junction feel that they would not help, and may worsen the situation.

Many say that traffic lights here would cause tailbacks onto the A2, even more so at peak times. They highlight the danger of such tailbacks referring to the speed of traffic heading eastbound at peak times.

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*"I don't want to see a traffic signal system that backs up traffic onto the A2, as that will cause accidents and possible deaths!" – User ID 86*

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Some share their opinion that the traffic here should be free flowing, especially considering its proximity to the proposed traffic lights at Bean junction. They argue that having two busy signalised junction roundabouts so close to each other would contribute to congestion with some routes requiring drivers to pass through four sets of roundabouts in order to exit the area. One respondent says that this problem would be more severe if the lights at each junction are not in sync with each other.

Respondents highlights other signalised junctions nearby that they feel do not work well:

- Pepperhill junction;
- Thurrock M25; and
- J2 M25

Another respondent feels that while traffic lights may be helpful when traffic volumes do increase, initially they would slow things down as the junction is still under-used.

### **6.3.4 Layout and design - Interaction with other infrastructure**

#### **Ebbsfleet Garden City**

Respondents raise the need for a 'decent infrastructure' to support Ebbsfleet Garden City, its future residents, and the existing residents of the Ebbsfleet area. Some argue that it should be the responsibility of the developers of such large projects to fund road infrastructure improvements before they start building.

Some respondents doubt the assessments and assumptions made, the data used and therefore the conclusions reached by Highways England, and feel that the proposed layout would be able to cope with the volume of traffic generated by this development.

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*"I think the data you have used is inadequate and assumptions unreasonable" - User ID 100035*

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#### **Swanscombe Theme Park**

Many respondents refer to the proposals that they have seen for the Swanscombe Theme Park which includes an access route from Ebbsfleet junction, pointing out that this contradicts Option 1b which does not allow for this access route.

Some of these people object to this exclusion in the design, and suggest that if the theme park does go ahead, the roads as proposed would have to be completely redesigned to support the quantity of cars that will be travelling to and from the resort. They say that ultimately the developers of the theme park will be the ones to dictate how the junction should function.

#### **Pepperhill junction**

Several respondents feel that there should be better integration with Pepperhill junction and the surrounding area, which they feel is often impacted by incidents at the Dartford crossing. Others say that there are not enough lanes which contribute to congestion suggesting that Highway England should increase it to four lanes coming through Pepperhill and Ebbsfleet junctions.

#### **Dartford Crossing**

Some respondents feel that accidents at the Dartford crossing cause gridlock on the Ebbsfleet junction, Pepperhill junction and the A2 generally. They report that drivers using satnavs to find alternative routes are directed through the area. They feel that the crossing should be improved as a higher priority than changes to this junction.

## Nearby junctions and roads

Some respondents feel that increasing capacity at Ebbsfleet junction would have a negative impact on connecting roads that would not match the new capacity created, such as the B259 and A2260 and the surrounding country lanes.

### 6.3.5 Layout and design – Non-motorised users

Some respondents ask that all alternative methods of transport should be encouraged alongside the upgrade, including cycle routes and bus and train services. They ask Highways England to retain and improve the existing footpaths and cycle paths in the area, suggesting that if they were more desirable it would encourage more sustainable transport. They feel that the routes could be more straightforward, flat and follow more convenient lines.

They specifically highlight the cycle route alongside the A2 eastbound as dangerous due to the speed of traffic, narrow lanes and a sharp turn at the bottom.

### 6.3.6 Layout and design – Signage

Respondents say that signage in the Ebbsfleet area is currently confusing to the point of being dangerous. They report that HGVs are often guided into incorrect lanes before having to correct themselves at the last-minute causing near-misses and delays.

Some say the signage directs cars on long routes unnecessarily, referring to Northfleet signs as an example of this. They say this leads to confusion amongst drivers who do not know the area well.

### 6.3.7 Layout and design – Additional suggestions

#### Create local links between villages

Several respondents suggest that Highways England should take the opportunity to incorporate local lanes between villages that do not require drivers to join the A2. They refer to historical links that have been interrupted or removed as part of previous upgrades to the Strategic Road Network which has resulted in locals having to take extensive detours, or join the A2 at one junction just to exit at the next.

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*“You cannot get from Bean/Southfleet/Betsham over the other side to Swanscombe without having to go onto the A2 eastbound at Pepperhill and come off at Ebbsfleet. You can come the other way direct by going under the A2 and following the local traffic signs to come out onto foxhound way which is really useful. This will be needed even more when there is more 'life' over that side of the Ebbsfleet” – User ID 21*

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Some respondents raise Park Corner Road specifically as a previous link between local village communities. These respondents say that when the road south of Swanscombe was built this link was removed. They refer to promises made at the time that this local connection would be reinstated at the next road upgrade, but comment that they do not see this included in the proposals.

### **Remove A2 slip road access to Park Road**

Many respondents feel that access to Park Corner road from the westbound off-slip should be removed due to its impact on local country lanes. They report that when there is an incident or delay on the A2 many cars and HGVs divert up Park Corner road, with HGVs causing a particular problem due to the narrow roads.

Some comment that it is not clear from the proposal what Highways England intends to do with this access road.

Other suggestions include:

- Simultaneously increase capacity at the A2260 station junction and the A226 Thames Way junction;
- Establish a permanent breakdown recovery unit for the area to move incidences efficiently before they create unmanageable congestion;
- Prevent HGVs from leaving the main carriageway to use the narrow country lanes; and
- Widen the A2 to cope with the volume of HGVs, specifically past Ebbsfleet International.

### **6.3.8 Environment**

#### **Air Quality/Pollution**

Many respondents are especially concerned about air quality in the local area, they argue that the proposed Option 1b would worsen the already serious situation by increasing the number of vehicles, and that the traffic lights would keep cars at standstill whilst they are producing damaging fumes.

Some argue that freight is a major contributor to local pollution, and the dependency on HGVs is not addressed despite there being alternatives such as water and rail opportunities local to the junction.

Most who comment on air quality ask that Highways England remains considerate of this issue and its effect on local residents' wellbeing.

Other environmental concerns that respondents share include:

- Option 1b would increase flood risk by laying additional concrete surfacing that reduces the natural absorption capabilities of the ground;
- Removal of trees near the junction, which would increase the air quality issue; and
- Artificial light pollution is already a problem in the area and the Option 1b would make this worse.

### **6.3.9 Alternatives**

Some respondents suggest the following alternatives to Option 1b:

- Instead of traffic lights keep the junction free flowing and incorporate viaducts to reduce interruption of traffic flows;
- Simplify the junction by consolidating the smaller roundabouts into one, or instead having one box junction;
- Provide free or cheap parking at Ebbsfleet International station and other nearby stations to encourage public transport use and get cars off the road; and
- Address issues at Dartford crossing instead of changing the junction.

## 6.4 Stakeholder responses

### 6.4.1 Need case

Some stakeholders (Gravesham Borough Council, Dartford Borough Council, Southfleet Parish Council, London Resort Company Holdings) write that they recognise the need for improvements to the Ebbsfleet junction. Dartford Borough Council states that they would like to see Highways England bring the plans forward at any opportunity so that the new layout is in place ahead of the planned development that will rely on it.

London Resort Company Holdings says that at peak times the junction is already starting to approach its capacity. Southfleet Parish Council echoes this view, saying that it is heavily used by Southfleet residents, and the increasing volumes of traffic are starting to affect the local quality of life. They state that remedial works are needed urgently ahead of developments, specifically Ebbsfleet Garden City.

### 6.4.2 Support/Oppose

Land Securities Eastern Quarry specifically supports the proposed widening of the westbound on-slip. They feel that the proposed Option 1b is an appropriate solution that would support upcoming development in the area.

However, Dartford Borough Council feels that the limited increase in the size of the roundabouts at the junction does not allow for additional queuing capacity which could be an issue as traffic volumes increase.

### 6.4.3 Layout and design

Gravesham Borough Council, High Speed 1, and Peninsula Management Group all state that they understand why the proposed Option 1b does not account for Swanscombe Theme Park, but stress that Highways England must reach an understanding with the developers of the theme park as soon as possible due to the volume of extra traffic that would be expected if it does go ahead.

These stakeholders feel that the new layout of Ebbsfleet junction must be resilient enough to support the Theme Park, adding that it is confusing for the public to have two contradictory proposals being consulted on at once.

Historic England is concerned that failing to account for Swanscombe Theme Park in the junction improvements could result in additional construction work to provide an access route if the theme park does go ahead, therefore increasing the risk of damage to archaeological resource at springhead.

High Speed 1 expresses concern about the potential impacts if the proposed theme park is not fully accounted for. They feel that there is potential for theme park traffic to overwhelm the proposed option 1b, which would affect drivers travelling to Ebbsfleet International. They support traffic lights but believe they should be weighted in favour of morning and afternoon peak traffic flows to and from the station.

Bluewater and Land Securities Eastern Quarry both say that Ebbsfleet International train station has seen less traffic than initially forecast, which they argue leaves some leeway in capacity at the junction for other developments.

Kent Police Traffic Management Unit says that they trust Highways England has modelled appropriately and that the proposed Option 1b would not cause queuing on the A2. They also request technological provisions for messaging and monitoring to improve traffic management and 'cone bins' to assist responders.

Bean Residents Association raises concerns that any tailbacks that the proposals do cause would have severe impact on new homes being built alongside A2 due to pollution, noise and access.

Dartford Borough Council says that it is not clear from the plans if access to Park Corner road is retained. They write that the road is a historic link between local communities.

Southfleet Parish Council says that the slip road access must be closed to protect the local roads as there is already an issue with vehicles detouring via this route, especially HGVs that cannot fit through width restricted lanes.

Stakeholders say improvements must be made at the main carriageway, and that the proposed layout of Ebbsfleet junction must allow for the A2 to be widened. They also say that Pepperhill junction should be incorporated into the plans given its close proximity to Ebbsfleet junction.

Peninsula Management Group requests that access to the Swanscombe Peninsula Industrial Estate is not interrupted during construction as vehicles using this often have to adhere to strict delivery timetable and ferry schedules.

Southfleet Parish Council says that problems at the Dartford Crossing must be addressed as any incidents there can cause congestion throughout the local area and to the south of Southfleet.

Swanscombe Town Council says that more pressure should be applied to resolve delays with progress of the proposed Lower Thames Crossing as a second crossing would alleviate the congestion in the area.

Springhead Nurseries part own a piece of land next to the Bean roundabout as well as a water main to their property. They request consideration of this during further design of the layout and that Highways England provides them with more clarification of potential impact;

#### **6.4.4 Environment**

Dartford Borough Council shares its appreciation for the efforts made to design proposals with minimal environmental impact to the local area. Both Dartford and Gravesham Borough Councils suggest that Highways England assesses possible air quality impacts on

the locations where housing development is planned, as well as where there is existing housing. They believe that some of these future residential areas may require mitigation.

The Council also believes that more assessment is needed to understand potential impact on archaeology, as well as further species surveys. They say that Ebbsfleet marshes may be directly affected, and that Northfleet Local Wildlife Site (LWS) habitats must be avoided or mitigated.

Kent Wildlife Trust also comments on potential habitat impacts, praising the efforts taken by Highways England so far to minimise direct impacts such as land-take, but also advising that indirect impacts such as pollution must be assessed and mitigated.

The Environment Agency comments on the proximity of the junction to the River Ebbsfleet. They stress that while the proposals do not currently encroach onto the floodplain, if this changes as the plans develop, then further assessment may be required. They also say that discharge to the River Ebbsfleet should not exceed existing rates and where possible should be reduced.

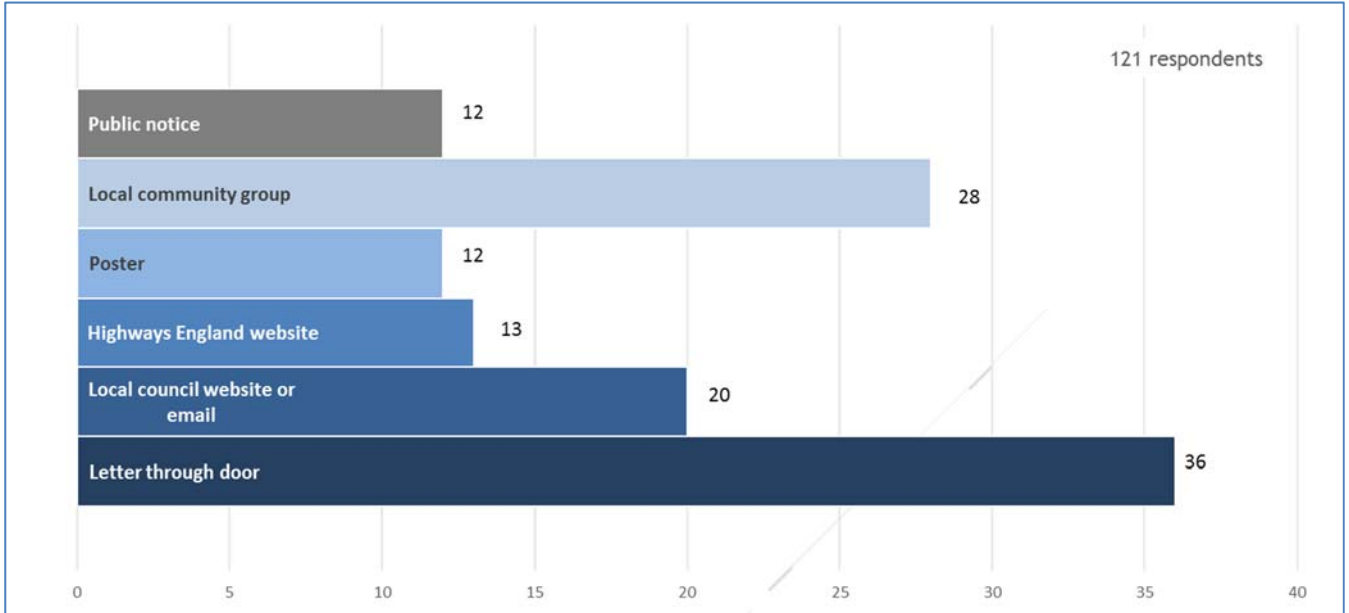
Historic England says that Highways England must pay attention to the location of significant Roman archaeological remains in the area, and ensure that they do not harm them. They also say that there are potentially high costs related to archaeological mitigation that Highways England should be aware of. They ask that Highways England refers to a detailed report published by Wessex Archaeology related to HS1.

Kent County Council welcomes the avoidance of the Scheduled Monuments of 'Springhead Roman site' and Neolithic sites near the River Ebbsfleet, but challenge the assessment of the undesignated heritage assets in the area of Springhead. They also request that Highways England considers how heritage assets such as Roman temple TQ 76 SW 1384 (which was preserved during works for HS1) could be preserved as part of the proposed scheme and request a detailed desk-based assessment for the area. They request that this assessment should also include a more detailed assessment of historic landscape.

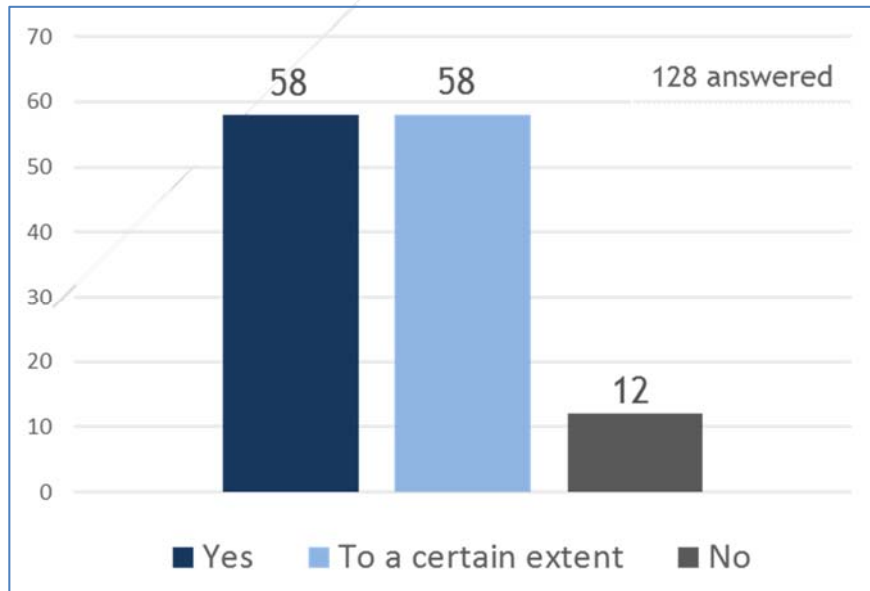
# 7 Response analysis – consultation process

## 7.1 Overview

**Fig. 14** Count of responses to Question 11: “How did you find out about the A2 Bean and Ebbsfleet junction improvements consultation?”

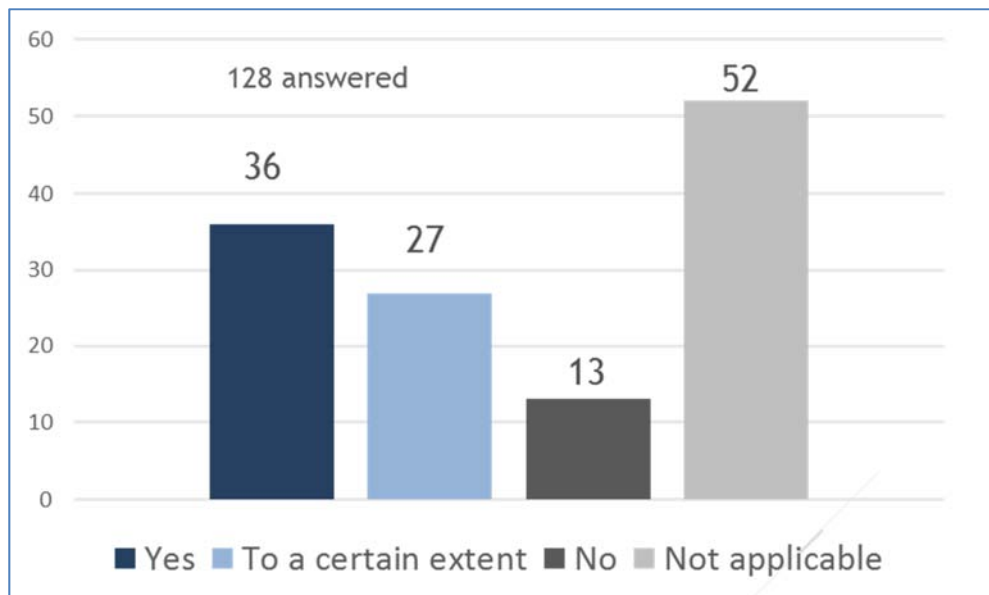


**Fig. 15** Count of responses to Question 12: “Have you found the consultation materials useful in answering your questions?”





**Fig. 16 Count of responses to Question 13: “Have you found any of our public exhibitions helpful in addressing your questions?”**



## 7.2 Summary of issues about the consultation process

In addition to the closed questions above, respondents were asked; “Do you have any comments on the consultation process?”. A total of 64 responses were received to this question – a significantly smaller number than the other open questions relating to specific elements of the scheme. The main themes of these responses – plus related comments in responses that did not follow the questionnaire format – have been summarised below.

The majority of responses regarding the consultation process are from members of the public. Their views are also reflected in responses from local councils and other stakeholder organisations. For this reason, the summary of the main issues below covers responses from the public and stakeholders together.

### 7.2.1 Lack of faith in the consultation process

Some respondents are concerned that only one option for each junction was included in the consultation. They feel the consultation is just a box ticking exercise as the public had not had any involvement in assessing the alternative options. They feel that the decision has already been made and the views they have submitted will not be listened to. One respondent questions how the statutory consultation planned for later would be any different if the preferred option had already been decided.

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*“I think it is a great shame that the proposals were put together, modelled, discussed, rejected and then decided upon without any local input. Local knowledge could have flagged up current problems and potential problems with the Options put forward.” - User 64*

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### 7.2.2 Scope of the consultation process

A few comments relate to the scope of the consultation. Some respondents feel the consultation is too focussed on accommodating future population growth and should take

more account of the impact on traffic flows to and from Bluewater during the construction process.

### 7.2.3 Promotion methods

Some respondents feel the consultation was poorly advertised, reporting that they only heard about it via word of mouth. Others say there was not enough notice of the public exhibitions with some receiving letters after the consultation period had started or just a day before the first public exhibition.

A few respondents express dissatisfaction that their community was not included in the distribution area for letters and leaflets. These areas are:

- Part of Swanscombe
- Part of Southfleet
- DA13 postcode area (including Meopham)
- A road directly connected to Ebbsfleet junction (not specified in the response)

### 7.2.4 Public Consultation Exhibitions

A few respondents are very concerned that a public consultation exhibition was not held in Swanscombe and Greenhithe. The Town Council notes the large number of people in this community who will be affected by the proposals and requests an event to be held within the area to encourage further public participation.

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*“Swanscombe and Greenhithe residents need, and deserve, to have consultation events held within Swanscombe and Greenhithe as there is a very large level of residents who will be impacted by any proposals” - Swanscombe and Greenhithe Town Council*

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The feedback received on the exhibitions themselves is mixed. Some respondents feel that the staff at the exhibition were not well informed about the project and lacked knowledge of the local area but others say they found the exhibition useful and staff had been helpful and pleasant. The flyover video receives praise in several responses.

One respondent was unable to locate the event in Bean as there were no signs to point them in the right direction.

### 7.2.5 Positive feedback

Some respondents express positive comments about the consultation process including from Dartford and Gravesham Borough Council, Southfleet Parish Council and CPRE Kent. They indicate Highways England had made a good start but would need to keep talking to stakeholders and demonstrate how it has made changes in response to feedback.

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*“It does not matter who comes up with an idea the important thing is to get the best possible design in place with the minimum of disruption. To this end the willingness of Highways*

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*England to listen to people has been encouraging. The real test will be seeing how many changes are actually made” - CPRE Kent - Dartford and Gravesham*

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### **7.2.6 Requests for further engagement**

The following stakeholders were highlighted as requiring further engagement as the design process continues:

- Bean Residents Association
- Bluewater (Land Securities)
- Cycling UK
- Dartford Borough Council and Spirits Rest Horse Sanctuary (regarding the relocation of the sanctuary)
- Ebbsfleet Investment General Partners (EIGP)
- Emergency Services Forum (suggested by Dartford and Gravesham NHS Trust)
- Environment Agency
- High Speed 1
- Historic England
- Hope Cottages: 14, 15 and 16 (further impact and mitigation assessment required)
- Kent County Council (heritage and highways teams)
- Land Securities Eastern Quarry Ltd
- London Resort Company Holdings
- Peninsula Management Group
- Springhead Nurseries (regarding land ownership)
- Thames Gateway Kent Partnership
- Thames Water (regarding the sewer which runs across the field at the back of Beacon Drive)
- WSP | Parsons Brinkerhoff

## 8 Summary of meetings

Throughout the consultation period, meetings were held with various stakeholders to provide information about the scheme and respond to their questions.

**Table 5. Stakeholder meetings held during the consultation period**

<b>Date</b>	<b>Stakeholder</b>	<b>Content</b>
26th January 2017	Bluewater Community Forum*	Discussion of feedback from PIE events and possibility of holding additional events in Swanscombe and Greenhithe.  Arrangements for affected landowners
3 <sup>rd</sup> February 2017	Bean Residents Association	Presentation of option development and discussion
6 <sup>th</sup> February 2017	Bean Residents Association (evening meeting)	Presentation of option development and discussion
22 <sup>nd</sup> February 2017	Bluewater Retail Partnership	Proposal to close slip road  Traffic over Christmas period  Construction duration period
3 <sup>rd</sup> March 2017	Meeting with affected landowners	Proposed land take required for scheme
3 <sup>rd</sup> April 2017	Swanscombe and Greenhithe Town Council	Presentation of option development and discussion

\* Bluewater Community Forum includes representatives from a range of local stakeholders, including: Gareth Johnson, MP, Councillor Brian Reed, Councillor Peter Harris, Dartford Borough Council, Bean Residents Association, Ebbsfleet Development Corporation, Stone Parish Council, St Mary's Parish Council, Stone Parish Neighbourhood Plan, Kent Police.

In addition to the meetings detailed above, the following ongoing engagement took place:

- Meetings and phone calls with affected landowners; and
- Conversation with Bluewater Land Securities regarding traffic simulation and traffic management.

## 9 Summary of enquiries

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Over the consultation period 50 enquiries were received – either by email or through the Highways England Customer Contact number. Queries were mostly from individual members of the public, rather than from stakeholder organisations.

Queries covered the following topics:

- Requests for booklets;
- Respondents reporting trouble with consultation website;
- Requests for Public Information Events in Greenhithe and Swanscombe;
- Queries about options for residents in Ightham Cottages (from family members and MPs);
- Request for information about the impact of the scheme on Hope Cottages;
- Request for clarification on consultation materials;
- Requests for information regarding the provision of local services (schools, water treatment) needed in relation to new housing development in the area; and
- Request for information regarding Park Corner Road

Some communication received provided a response to the consultation, or feedback on the proposals without asking a specific enquiry.

Where communication received – whether in the form of an enquiry or as direct feedback – offered comment on the scheme proposals, these communications were processed as responses to the consultation and have been included the summary in chapters 4 – 7.

## 10 Conclusions

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### 10.1 General

#### 10.1.1 Response to the Consultation

A total of 274 people attended the Public Information Events and 169 responses to the consultation were received. The responses were broken down as follows:

- Online questionnaire 84
- Paper questionnaire 47
- Email / letter 38

#### 10.1.2 Key issues of concern

In response to the closed question aimed at determining the issues of concern to the public, four issues had the highest number of responses. These were: /

- Turning onto/off the A2 at Bean;
- Journey times around Bean junction;
- Road safety at both junctions; and
- Air quality at both junctions.

This confirms the understanding of the project team on the key issues of concern.

### 10.2 Response to the consultation process

Generally speaking, respondents recorded that they had found the consultation materials and the consultation events helpful in answering/addressing questions.

The greatest concern expressed was the fact that the consultation only included a single option at each junction and hence there was a view that a decision had been made. While this position is understandable, the consultation materials and the supporting technical reports that were made available clearly set out the rationale for having a single option in the consultation.

It was noted that the visualisation video was well received and this is something that Highways England should consider for forthcoming events on this and other projects.

### 10.3 Response to the overall scheme

#### 10.3.1 Key themes raised by the public

In response to the open question on the overall scheme, there were a number of recurring concerns, namely:

- The need to design for the future and the significant development taking place and planned for the area;

- The importance of implementing the scheme as soon as possible;
- Traffic forecasting and the peak hours used;
- The exclusion of Swanscombe Theme Park from the assessment;
- The proposal to install traffic lights at the roundabouts;
- The provision for non-motorised users; and
- The impact on the local community during construction, particularly with regard to noise and air quality.

### **10.3.2 Key themes raised by stakeholders**

Many of the stakeholders agree that there is a clear need for the improvements but also note the following concerns:

- The exclusion of Swanscombe Theme Park from the assessment;
- Traffic forecasting and the peak hours used; and
- The provision for non-motorised users.

### **10.3.3 Conclusions from the project team**

There is clearly common ground between the concerns raised by the public and the project stakeholders on the overall scheme.

The traffic modelling for the project has followed national guidance but there are concerns locally that a major development, such as Bluewater, should be factored into the assessment, particularly when the peak traffic periods are at weekends and over the Christmas period. It may therefore be appropriate to consider more sensitivity testing during the development of the preliminary design in Stage 3, which could then be reported as part of the statutory consultation.

The exclusion of Swanscombe Theme Park from the assessment is a major concern and while the rationale for the exclusion is clear within the project team, that is no DCO submission has yet been made, this will require, subject to how the theme park scheme develops over the coming months, clearer explanation at the next consultation.

The use of traffic lights at the roundabouts is proposed and while a number of respondents can understand the rationale for this it is clearly a major concern for some members of the public and stakeholders. A greater emphasis on explaining the benefits of traffic signals will need to be made as the scheme progresses.

Provision for non-motorised users was a recurring theme and this will be developed during Stage 3. Clear opportunities exist, as discussed at the Value Management Workshop on 5 April 2017, to consider these issues in a co-ordinated manner between Highways England and the local authorities in the area.

Noise and air quality are concerns and the Stage 1 environmental assessment concluded that it was unlikely that the scheme would have a significantly detrimental impact on noise or air quality. Further modelling is being undertaken as part of Stage 2 and this will be reported and can be used with the findings in Stage 3 to inform the public during the statutory consultation.

## 10.4 Response to the proposals at Bean junction

### 10.4.1 Key themes raised by the public

Of the 129 respondents to the question on to what extent they were in agreement with the proposals at Bean, 66 noted that they either strongly agreed or agreed with the proposals, while 44 either strongly disagreed or disagreed with the proposals. Recurring themes were as follows:

- The majority of respondents recognise the need for the scheme;
- There is a concern that the lowest cost solution is being promoted at the exclusion of more suitable options;
- Concern over the loss of Ightham Cottages and the Spirits Rest Horse Sanctuary;
- Concern over the proposed traffic signals, from the perspective of both traffic flow and air quality;
- Concern over the peak periods included in the traffic model, given the local situation presented by Bluewater;
- Concern over the exclusion of the Swanscombe Theme Park from the assessment;
- Concern over the removal of the slip road from the B255 to the A296;
- Concern over the need for clear signage at the junctions; and
- Concerns over noise and air quality.

### 10.4.2 Alternatives proposed by the public

A number of alternatives have been put forward by the public as follows:

- Free flow junctions instead of using traffic signals on the roundabouts;
- Retaining the link from the B255 to the A296 and then to the A2 eastbound;
- Separating local traffic from Bluewater and A2 traffic; and
- Demolishing the existing bridge over the A2 and building a new bridge that would allow for widening of the A2.

### 10.4.3 Key themes raised by stakeholders

Again there is general consensus between members of the general public and stakeholders. Recurring themes are as follows:



- A recognised need for improvement of the junction;
- Concern that Option 5 is not a complete solution;
- Concern over the loss of Ightham Cottages and the Spirits Rest Horse Sanctuary;
- Concern over the use of traffic signals; and
- Concern over the removal of the link from the B255 to the A296.

#### **10.4.4 Alternatives proposed by stakeholders**

Two of the stakeholders proposed the following alternatives:

- A more free-flowing design with a reduced number of traffic signals; and
- A scheme combining elements of Option 5 and Option 3, particularly the inclusion of the A2 slip roads south of the A2.

#### **10.4.5 Conclusions from the project team**

It is concluded that while elements of the proposed scheme are contentious, such as the acquisition of the Ightham Cottages, it is positive that more respondents agreed with the scheme than disagreed with the scheme. A number of the recurring themes have been addressed in section 10.2 above and so the remainder of this section will address the specific issues identified for Bean junction.

It is true that the proposed scheme is the lowest cost scheme but it is not proposed solely on this basis. Option 5, in combination with Ebbsfleet Option 1b, has the best performance against the wider scheme objectives.

It is acknowledged that the proposed loss of Ightham Cottages and the Spirits Rest Horse Sanctuary is a highly sensitive issue. Close collaboration between Highways England and the appropriate local authorities, working within their statutory remits, should seek to ensure that those affected by the scheme are treated with respect and that their cases be given proper consideration.

The retention of the link between the B255 and the A296 is a matter that Highways England will consider during Stage 3, the preliminary design. This is likely to only include provision for straight ahead or straight ahead and right turning traffic as to include the left turn to the A2 eastbound would diminish the basis for the scheme, whereby the Bluewater and Dartford traffic streams accessing the A2 eastbound are split.

With regard to the alternatives proposed, the link from the B255 to the A296 has been discussed above and will be investigated in the preliminary design. Free flow junctions and separating local traffic would require the development of a scheme that would be beyond the scheme objectives agreed and would far exceed the available scheme budget. Making provision for future widening of the A2 by demolishing the existing overbridge as part of this scheme would need to be considered by Highways England as part of a wider A2 route strategy as the costs involved would exceed the available scheme budget. Combinations of the presented options were considered during the scheme development and those put forward were considered to be the optimal layouts for each solution.

## 10.5 Response to the proposals at Ebbsfleet junction

### 10.5.1 Key themes raised by the public

Of the 127 respondents to the question on to what extent they were in agreement with the proposals at Ebbsfleet, 63 noted that they either strongly agreed or agreed with the proposals, while 27 either strongly disagreed or disagreed with the proposals. Recurring themes were as follows:

- There is less certainty among respondents that this junction needs any improvement;
- Concern over the proposed introduction of the traffic signals;
- Concern over the lack of access to Swanscombe Theme Park;
- Concern over the provision for non-motorised users;
- Concern over the suitability of existing signage;
- A preference for local roads that are not impacted by A2 traffic;
- Reconsideration of access to existing roads such as Park Road; and
- Concerns over air quality.

### 10.5.2 Alternatives proposed by the public

Alternatives proposed were as follows:

- Use of free-flow junctions instead of traffic lights;
- Combine the two roundabouts into one; and
- Encourage free or cheap parking at local stations to encourage public transport use.

### 10.5.3 Key themes raised by stakeholders

There is general consensus between members of the general public and stakeholders, although on balance stakeholders accept the need to improve the junction more readily than members of the public. Recurring themes were as follows:

- Concern over the lack of consideration of Swanscombe Theme Park and statements encouraging Highways England to come to an understanding with the developer; and
- Consideration of access to existing roads such as Park Road.

### 10.5.4 Alternatives proposed by stakeholders

No alternatives were put forward by stakeholders other than consideration for a more free-flowing junction by one stakeholder.

### **10.5.5 Conclusions from the project team**

It is concluded that it is positive that considerably more respondents agreed with the scheme than disagreed with the scheme.

A number of the recurring themes have been addressed in previous sections above. The remainder of this section will consider issues specific to Ebbsfleet. Given that there are currently less problems at Ebbsfleet than Bean, it is understandable that the public are less convinced by the need to improve the Ebbsfleet junction. However, the predicted traffic flows are such that improvements will be necessary. The retention or otherwise of the access to Park Corner road will be considered as part of the Stage 3 preliminary design. The separation of strictly local and A2 traffic would be beyond the scheme objectives and would require investment in excess of the available scheme budget.

The suggested amalgamation of the two roundabouts into a single roundabout was considered as part of the option development but resulting in unacceptable traffic delays as there were increased conflicting traffic movements.

The matter of parking charges at the railway stations is beyond the remit of Highways England.



## Appendix A – Coding Framework

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### Purpose of the framework

The analysis framework is a tool to help write a summary report. The framework is applied to the responses to create an indexed data set which can be interrogated to produce the summary of issues, and to retrieve responses on particular issues at a later date.

### About using the framework

The coding framework is organised into “Themes”; these are high-level categories which help us organise the codes. This document features a description of each theme, and then lists the codes in that theme.

The analysis system is designed to allow responses to be coded in layers – recognising that if each code summed up a complete idea then responses would not be summarised, just copied out. As an example, we will use codes for particular locations on top of codes capturing particular issues to identify where those issues are geographically specific.

Theme
Bean
Consultation
Ebbsfleet
Other
Scheme

## Bean

This theme captures people's comments on the proposals for Bean junction. Many respondents commented on Bean junction within the questions relating to Bean (questions 2, 3a, 3b, 4a, 4b, and 5). However, this theme was also used to collate comments about Bean junction throughout the questionnaire (for example, if a respondent made a comment about Bean junction within a question about Ebbsfleet, this comment would have had one of the following Bean codes applied). In addition, this theme was used to capture comments about Bean junction from responses that did not use the format of the questionnaire.

**BEA** – The three letters at the beginning indicate the theme

**BEA – Environment** - the next word specifies the type of response

**BEA – Environment – air quality** – the last part captures the specific nature of the response

Bean
BEA - Alternatives
BEA - Community impact
BEA - Community impact - emergency vehicles
BEA - Community impact - local roads
BEA - Environment
BEA - Environment - air quality
BEA - Environment - ancient woodland/heritage sites
BEA - Environment - mitigation
BEA - Environment - noise
BEA - Layout and design - 2 to 1 - concern
BEA - Layout and design - additional suggestions
BEA - Layout and design - interaction with other infrastructure
BEA - Layout and design - new slip road
BEA - Layout and design - NMU
BEA - Layout and design - oppose
BEA - Layout and design - oppose traffic lights
BEA - Layout and design - removal of existing slip road
BEA - Layout and design - road user habits
BEA - Layout and design - safety
BEA - Layout and design - safety - hard shoulder
BEA - Layout and design - signage
BEA - Layout and design - support
BEA - Layout and design - support traffic lights
BEA - Layout and design - traffic flow
BEA - Need case

### Consultation

This theme captures people’s comments on the consultation process. Many respondents commented on this through answering question 14. However, this theme was also used to collate comments about the consultation process that were made throughout the questionnaire. In addition, this theme was used to capture comments about the consultation process from responses that did not use the format of the questionnaire

<b>Consultation</b>
CON - Comments on previous consultations
CON - Events - negative
CON - Events - positive
CON - info/materials
CON - Info/materials - error
CON - Info/materials - missing/vague
CON - Lack of faith
CON - Process - challenge
CON - Process - positive
CON - Process - request for engagement
CON - Process - request for more info
CON - Process - suggestion
CON - Process - timescales
CON - Promotion methods - Bluewater
CON - Promotion methods - council or specific group
CON - Promotion methods - direct HE correspondence
CON - Promotion methods - lack of
CON - Promotion methods - library
CON - Promotion methods - newspaper
CON - Promotion methods - other
CON - Promotion methods - social media
CON - Promotion methods - word of mouth

## Ebbsfleet

This theme captures people's comments on the proposals for Ebbsfleet junction. Many respondents commented on Bean junction within the questions relating to Ebbsfleet (questions 6, 7a, 7b, 8a, 8b, and 9). However, this theme was also used to collate comments about Ebbsfleet junction throughout the questionnaire (for example, if a respondent made a comment about Ebbsfleet junction within a question about Bean, this comment would have had one of the following Ebbsfleet codes applied). In addition, this theme was used to capture comments about Ebbsfleet junction from responses that did not use the format of the questionnaire.

<b>Ebbsfleet</b>
EBB - Alternatives
EBB - Community impact
EBB - Community impact - emergency vehicles
EBB - Environment
EBB - Environment - air quality
EBB - Environment - ancient woodland/heritage sites
EBB - Environment - mitigation
EBB - Environment - noise
EBB - Layout and design - additional suggestions
EBB - Layout and design - interaction with other infrastructure
EBB - Layout and design - NMU
EBB - layout and design - not much difference
EBB - Layout and design - oppose
EBB - Layout and design - oppose traffic lights
EBB - Layout and design - Park Corner Rd
EBB - Layout and design - road user habits
EBB - Layout and design - safety
EBB - Layout and design - safety - hard shoulder
EBB - Layout and design - signage
EBB - Layout and design - support
EBB - Layout and design - traffic flows
EBB - Need case
EBB - Need case - currently under used
EBB - reliant on modelling

## Other

This theme is used to identify where respondents reference information outside their response, another question, or another consultation response. In addition, this code captures small bits of information such as quotes or respondent's context that may not be relevant to analyse as part of their response to the consultation.

Other
OTH - No comment
OTH - Context
OTH - Editor's note
OTH - Inappropriate language
OTH - Personal details
OTH - Refer to another question
OTH - Reference

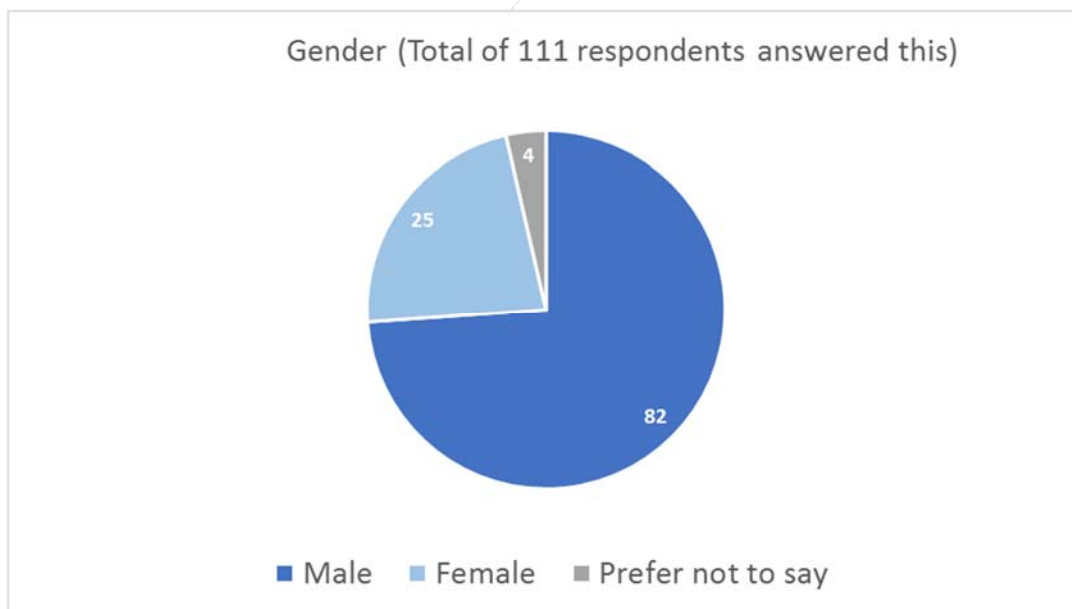
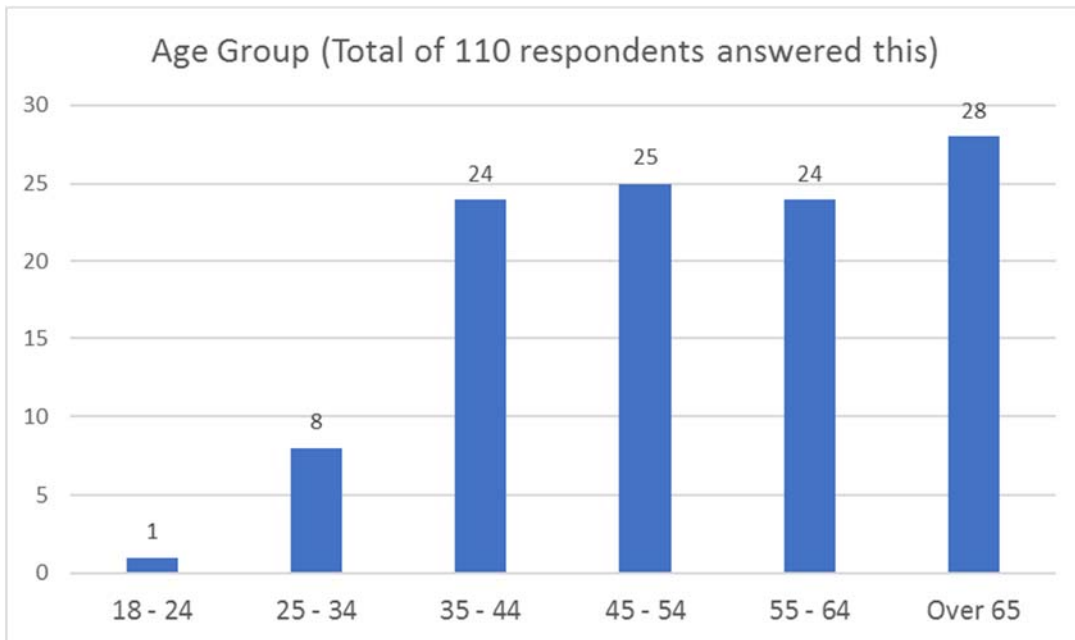
## Scheme

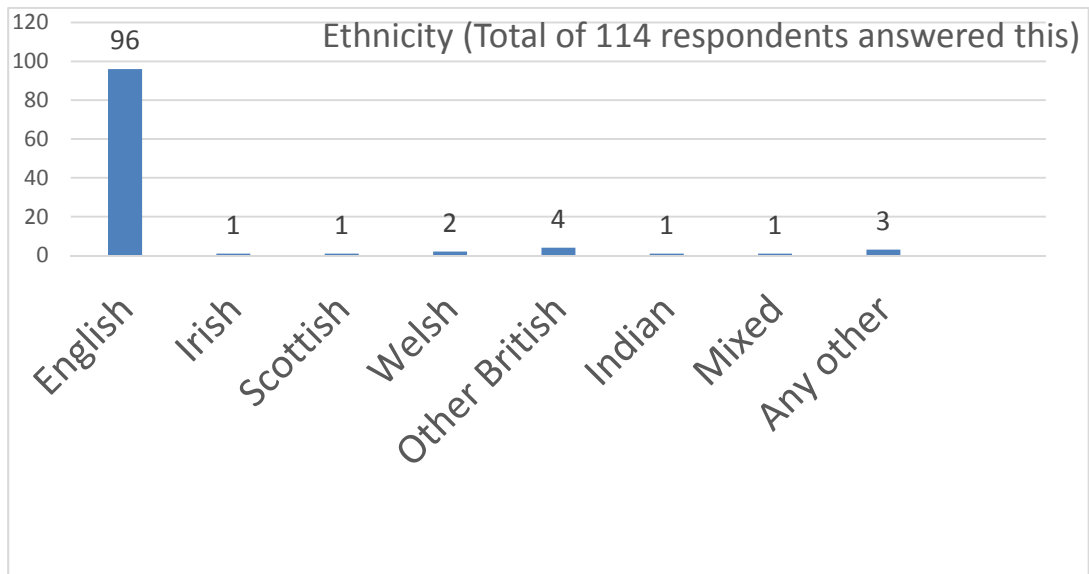
This theme is used to collate comments about the scheme as a whole. These comments are often made in reference to question 10, but this theme was also used to collate comments on the overall scheme that were made throughout the questionnaire, as well in responses that didn't use the questionnaire format.

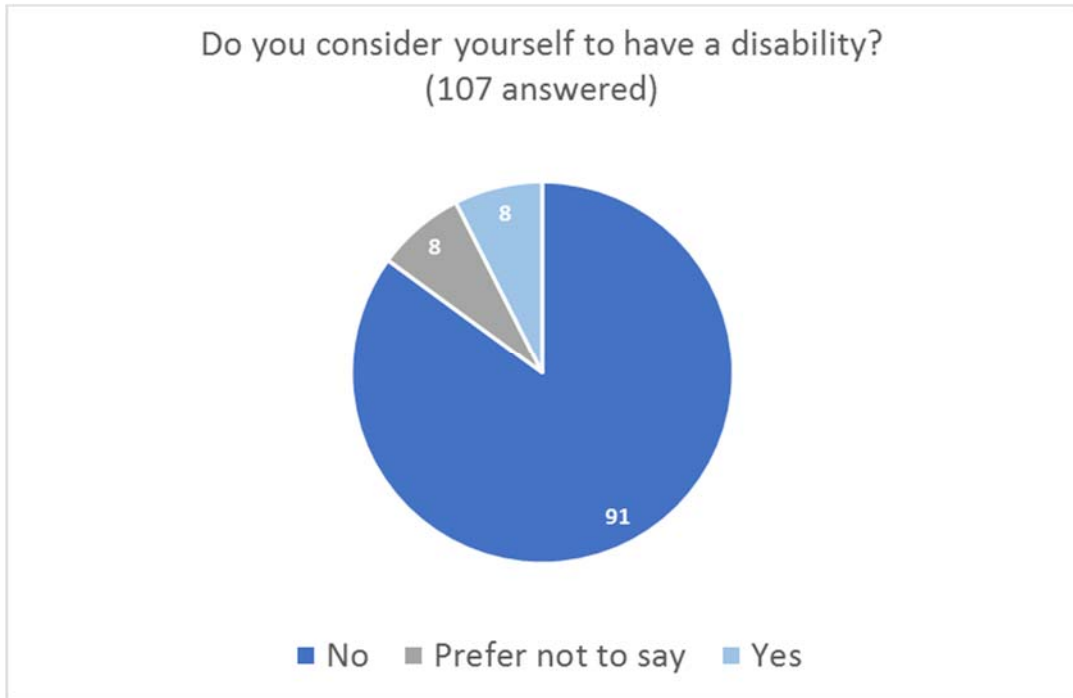
Scheme
SCH - Challenge
SCH - Challenge - assessment insufficient
SCH - Challenge - will not meet demand/address problem
SCH - Community impact
SCH - Concern - affected properties/land take
SCH - Concern - broader concerns
SCH - Concern - construction period
SCH - Concern - journey times
SCH - Concern - safety
SCH - Concern - timescales/urgent need
SCH - Concern - value for money
SCH - Environment
SCH - Local economy
SCH - Need case
SCH - NMU
SCH - Planning/ Permissions
SCH - Suggestion
SCH - Traffic light suggestion/technology
SCH - Traffic lights



## Appendix B – Equality and diversity monitoring







## Appendix C – Consultation questionnaire

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Please see the next page for the consultation questionnaire.

# A2 Bean and Ebbsfleet junction improvements

## Questionnaire

18 January to 1 March 2017



Please read the consultation document before completing this questionnaire.

Questionnaires can be completed and returned as follows:

- Send it to us at our freepost address: **FREEPOST A2 Bean & Ebbsfleet junction improvements**
- Deposit the completed questionnaire at any of the 5 public exhibitions listed on page 13 of the consultation document
- Fill in the questionnaire online at: **[www.highways.gov.uk/a2be](http://www.highways.gov.uk/a2be)**
- Email us: **[A2BeanandEbbsfleetJunctionsImprovements@highwaysengland.co.uk](mailto:A2BeanandEbbsfleetJunctionsImprovements@highwaysengland.co.uk)**





# A2 Bean and Ebbsfleet junction improvements

Questionnaire

## A2 Bean and Ebbsfleet junction improvements questionnaire

The consultation will run from **18 January to 1 March 2017**. The closing date for returning this questionnaire and for any other comments and feedback is **Wednesday 1 March 2017 at 11.45pm**. Please complete your contact details below in capital letters.

Title: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Please provide your postcode if you do not want to provide your full address.

Postcode: \_\_\_\_\_

Email (optional): \_\_\_\_\_

Are you responding on behalf of an organisation:  Yes  No

If yes, please name the organisation: \_\_\_\_\_

The information you provide will be kept in a secure environment only accessible by Highways England and the specific contractor(s) working with us on this project. Your personal information will not be shared with any other individuals or organisations beyond the provision set out in the Freedom of Information Act 2000 and Environmental Information Regulations 2004. The information you submit will only be used in support of the purpose specified in the survey. Personal details are collected only to ensure entries are not duplicated and in order to contact correspondents if necessary.

### Current situation

1. How concerned are you about the following current issues? (Please tick the appropriate boxes) ✓

Issue	Very concerned	Concerned	Slightly concerned	No concern	No opinion
Ease of turning onto/off the A2 at Bean junction					
Journey times travelling around Bean junction					
Ease of turning onto/off the A2 at Ebbsfleet junction					
Journey times travelling around Ebbsfleet junction					
Provision of footpaths, cycleways and crossings at Bean and Ebbsfleet junctions					
Road safety at the junctions					
Air quality around the junctions					

## About the scheme

### Bean junction

The following questions relate to the Bean junction which connects to the B255, the A296, Bluewater Shopping Centre and the wider area. (Please tick the appropriate boxes) ✓

#### 2. How often do you currently use the Bean junction?

	Every day	3-4 times a week	About once a week	Once or twice a month	Rarely
Weekdays morning peak (8.00-9.00)					
Weekdays afternoon peak (17.00-18.00)					
Weekdays off peak (all other times)					
Weekends anytime					

#### 3a. To what extent do you agree or disagree that the Bean junction proposal will achieve the following objectives?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know
Support the economic and housing growth proposed for the north Kent area						
Improve the capacity of the Bean junction and minimise the impact on the A2						
Improve journey times at the Bean junction						
Improve road safety at the Bean junction						
Minimise impact on the environment at the Bean junction						
Provide value for money						



3b. Please provide details to illustrate your answers.

4a. Overall to what extent do you agree with the proposed option for Bean junction?

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know

4b. Please provide details to illustrate your answer.

5. Are there any local issues that you feel we should be aware of in developing our proposals around the Bean junction? Please provide details to illustrate your answers.

## Ebbsfleet junction

The following questions relate to the Ebbsfleet junction which serves the Ebbsfleet International Rail Station and connects the A2 to the A2260. It already provides access to the wider area and will also provide access to the proposed new and ongoing developments. (Please tick the appropriate boxes) ✓

### 6. How often do you currently use the Ebbsfleet junction?

	Every day	3-4 times a week	About once a week	Once or twice a month	Rarely
Weekdays morning peak (8.00-9.00)					
Weekdays afternoon peak (17.00-18.00)					
Weekdays off peak (all other times)					
Weekends anytime					

### 7a. To what extent do you agree or disagree that the Ebbsfleet junction proposal will achieve the following scheme objectives?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know
Support the economic and housing growth proposed for the north Kent area						
Improve the capacity of the Ebbsfleet junction and minimise the impact on the A2						
Improve journey times at the Ebbsfleet junction						
Improve road safety at the Ebbsfleet junction						
Minimise impact on the environment at the Ebbsfleet junction						
Provide value for money						

7b. Please provide details to illustrate your answers.

8a. Overall to what extent do you agree with the proposed option for Ebbsfleet junction?

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know

8b. Please provide details to illustrate your answer.

9. Are there any local issues that you feel we should be aware of in developing our proposals around the Ebbsfleet junction? Please provide details to illustrate your answers.

10. Do you have any further comments about this Bean and Ebbsfleet junction improvements scheme?

### About the consultation

(Please tick the appropriate boxes) ✓

11. How did you find out about the A2 Bean and Ebbsfleet junction improvements consultation?

- Letter through door
  - Local council website or email
  - Local radio
  - Highways England website
  - Poster
  - Local community group
  - Public notice
  - Other (please state)
- 

12. Have you found the consultation materials useful in answering your questions?

- Yes       To a certain extent       No

13. Have you found any of our public exhibitions helpful in addressing your questions?

- Yes       To a certain extent       No       Not applicable

14. Do you have any comments on the consultation process?

Thank you for completing this consultation questionnaire.

Completed questionnaires can be returned as follows:

- Send it to us at our freepost address: **FREEPOST A2 Bean & Ebbsfleet junction improvements**
- Deposit the completed questionnaire at any of the 5 public exhibitions listed on page 13 of the consultation document
- Fill in the questionnaire online at: **[www.highways.gov.uk/a2be](http://www.highways.gov.uk/a2be)**
- Email us: **[A2BeanandEbbsfleetJunctionsImprovements@highwaysengland.co.uk](mailto:A2BeanandEbbsfleetJunctionsImprovements@highwaysengland.co.uk)**

Your views help shape the scheme. All consultation questionnaires received are formally recorded and in accordance with data protection your personal details are used solely in connection with the consultation process.



## Equality and diversity

To ensure we are meeting our diversity guidelines please help us by filling in the following section of this questionnaire only if you are not responding on behalf of an organisation. You are not obliged to complete this; the information will only be used by Highways England to monitor its effectiveness at consulting with the whole community. This information will not be used for any other purpose and in publishing the results individuals will not be identified. (Please tick the appropriate boxes) ✓

### 15. Age

Under 18     18-24     25-34     35-44     45-54     55-64     Over 65

### 16. Gender

Male     Female     Prefer not to say

### 17. Ethnic group

#### British or Mixed British

English     Irish     Scottish     Welsh     Other (specify if you wish)

---

#### South Asian

Bangladeshi     Indian     Pakistan     Other (specify if you wish)

---

#### Black

African     Caribbean     Other (specify if you wish)

---

#### East Asian

Chinese     Japanese     Other (specify if you wish)

---

#### Mixed

Please specify if you wish

---

#### Any other ethnic background

Please specify if you wish     Prefer not to say

---

18. Do you follow a religion or faith?

Yes

No

Prefer not to say

19. Do you consider yourself to have a disability?

Yes

No

Prefer not to say



**Equality and  
diversity**

If you need help accessing this or any other Highways England information please call **0300 123 5000** (24 hours) and we will help you.

## Contact us

Please use the following methods to respond to the consultation:

- Complete the questionnaire and send to us at: **FREEPOST A2 Bean & Ebbsfleet junction improvements**

You can also:

- Attend a public consultation event and deposit your completed questionnaire at the event.
- Complete the consultation questionnaire online at: **[www.highways.gov.uk/a2be](http://www.highways.gov.uk/a2be)**
- Email: **[A2BeanandEbbsfleetJunctionsImprovements@highwaysengland.co.uk](mailto:A2BeanandEbbsfleetJunctionsImprovements@highwaysengland.co.uk)**
- Call: **0300 123 5000 (24 hours)**

**The closing date for submitting this completed questionnaire is 11.45pm on 1 March 2017.**

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This document is also available on our website at **[www.gov.uk/highways](http://www.gov.uk/highways)**

If you have any enquiries about this publication email **[info@highwaysengland.co.uk](mailto:info@highwaysengland.co.uk)** or call **0300 123 5000\***. Please quote the Highways England publications code **PR177/16**

Highways England, Creative S160533

\*Calls to 03 numbers cost no more than a national rate call to an 01 or 02 number and must count towards any inclusive minutes in the same way as 01 and 02 calls. These rules apply to calls from any type of line including mobile, BT, other fixed line or payphone. Calls may be recorded or monitored.

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## Appendix D – Consultation brochure

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Please see the following page for the consultation brochure.

# A2 Bean and Ebbsfleet junction improvements

Public consultation

Have your say



18 January to 1 March 2017

# A2 Bean and Ebbsfleet junction improvements

Public consultation

Have your say by completing the consultation questionnaire

Highways England is the government company responsible for operating and maintaining England's major A roads and motorways. Formerly known as the Highways Agency, we are also responsible for delivering improvements to the existing strategic road network.



This consultation will run for 6 weeks from **18 January to 1 March 2017**.

**We look forward to hearing from you. Please read this document and provide your feedback. Details on back page.**

## A2 Bean and Ebbsfleet junctions

The A2 Bean and Ebbsfleet junctions are situated on the A2 trunk road, approximately 1.2 miles apart (2km) within north Kent.

- **The Bean junction** connects the A296 and B255, which provides access to the Bluewater regional shopping centre, to the A2 and the wider area and is particularly busy at weekends.
- **The Ebbsfleet junction** serves the wider area and Ebbsfleet International Rail Station, connects the A2 to the A2260 and will also provide access to the new and ongoing developments.

## The need for a scheme

In the coming years the Bean and Ebbsfleet junctions will serve developments such as the Ebbsfleet Garden City development.

This development will create 15,000 new homes and more than 30,000 jobs could be created. (Source: Ebbsfleet Development Corporation).

Traffic modelling has indicated that without improvements to both junctions, the road network will become highly congested resulting in considerable delays and associated environmental issues.

- **The Bean junction** proposed development will result in traffic using the A2 Bean junction (including the A296) increasing by 50-60% during weekday and weekend peak periods by 2037 compared to 2014 traffic levels.
- **The Ebbsfleet junction** proposed development will result in traffic using the A2 Ebbsfleet junction increasing between 170 – 200% during weekday peak periods by 2037 compared to 2014 traffic levels.



## Objectives of the scheme

The objectives were developed in conjunction with the Department for Transport (DfT) and local authorities.

They are to provide improvements at A2 Bean and A2 Ebbsfleet junctions to:

- Support the economic and housing growth proposed for the north Kent area, including Ebbsfleet Garden City
- Increase the capacity of the junctions and minimise the impact on the A2
- Improve journey times
- Improve road safety
- Minimise impact on the environment
- Provide value for money with a Benefit Cost Ratio (BCR) of at least 2:1. This means that for every £1 spent on the scheme at least £2 of economic benefit will be created.

## Scheme details

Highways England has considered a number of options for both junctions. Following a detailed review of these proposals, Highways England has concluded that there is one option for each junction which meets the scheme objectives. Details of the proposal for each junction are as follows:

- The proposed Bean junction improvements broadly follow the existing road layout but with an additional bridge over the A2 adjacent to the existing bridge and a new slip road on to the A2 for eastbound traffic. It retains the existing junction layout but with the current roundabouts enlarged and converted to traffic signal control. A new bridge over the A2 for southbound traffic is provided to the east of the existing Bean Lane Overbridge, which is retained for northbound traffic.

- The proposed Ebbsfleet junction improvements broadly follow the existing road layout but with the existing roundabouts enlarged and with traffic signal control. Access is provided at the junctions to the new and ongoing developments. The link road between the roundabouts is widened from the existing single carriageway to a dual two lane carriageway. The existing eastbound and westbound slip roads from the A2 are retained. The eastbound and westbound slip roads to the A2 are widened.

The proposed scheme is being delivered by Highways England. It is funded by the Department for Transport with Section 106 contributions provided via the Kent Thameside Strategic Transport Programme and the Ebbsfleet Development Corporation. The Kent Thameside Strategic Transport Programme consists of seven improvement schemes (including the A2 Bean and Ebbsfleet junctions) that will be delivered as developer contributions come forward to Gravesham Borough Council, Dartford Borough Council and Ebbsfleet Development Corporation. The programme is administered by Kent County Council. The Ebbsfleet Development Corporation is the planning authority set up by Government to speed up delivery of up to 15,000 homes and create Ebbsfleet Garden City in north Kent.





## Scheme benefits

These are as follows:

- Supports economic development, including jobs and housing growth in north Kent
- Increases capacity on the road network to accommodate future growth
- Smooths traffic and improves journey times at both junctions
- Increases capacity for all road users without endangering safety
- Improves safety for all road users

- Provides better facilities for non-motorised users (such as cyclists, pedestrians and equestrians)
- Provides better access to public transport

## We want to hear your views

This consultation provides you with the opportunity to give your views on the proposed improvements to the Bean and Ebbsfleet junctions. Your feedback will assist us in planning and progressing the next stages of scheme development.



## A2 Bean and Ebbsfleet junctions

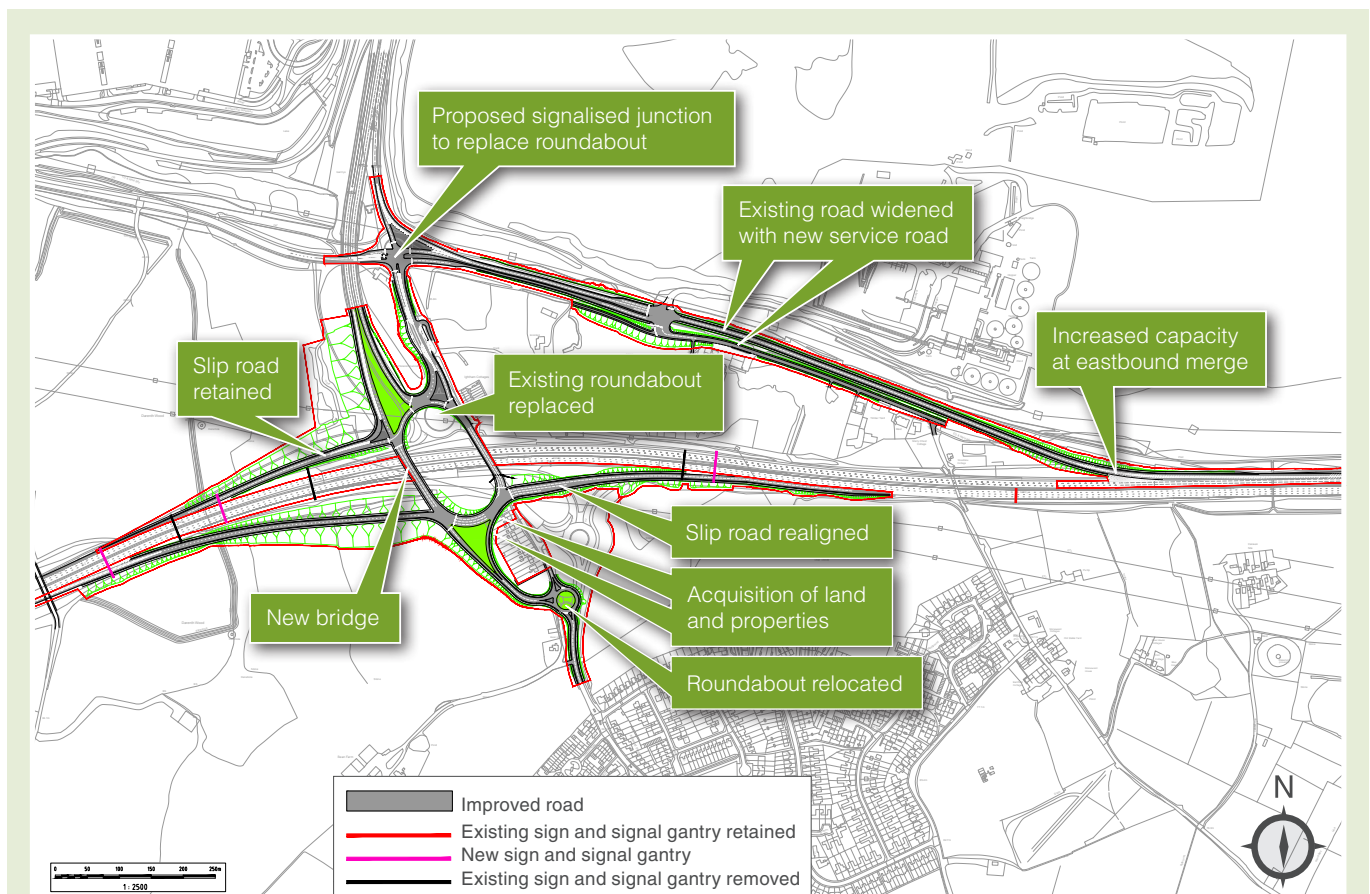
### How we developed the options

A number of concept options were initially developed for both junctions. These were assessed against initial traffic forecasts, topography and environmental and physical constraints. This process resulted in a longlist of possible options, with 7 options at Bean and a single option at Ebbsfleet (Option 1b). The other concept options at Ebbsfleet were rejected as they did not provide adequate access to development areas or did not perform adequately in terms of traffic movements or did not fulfill the scheme objectives.

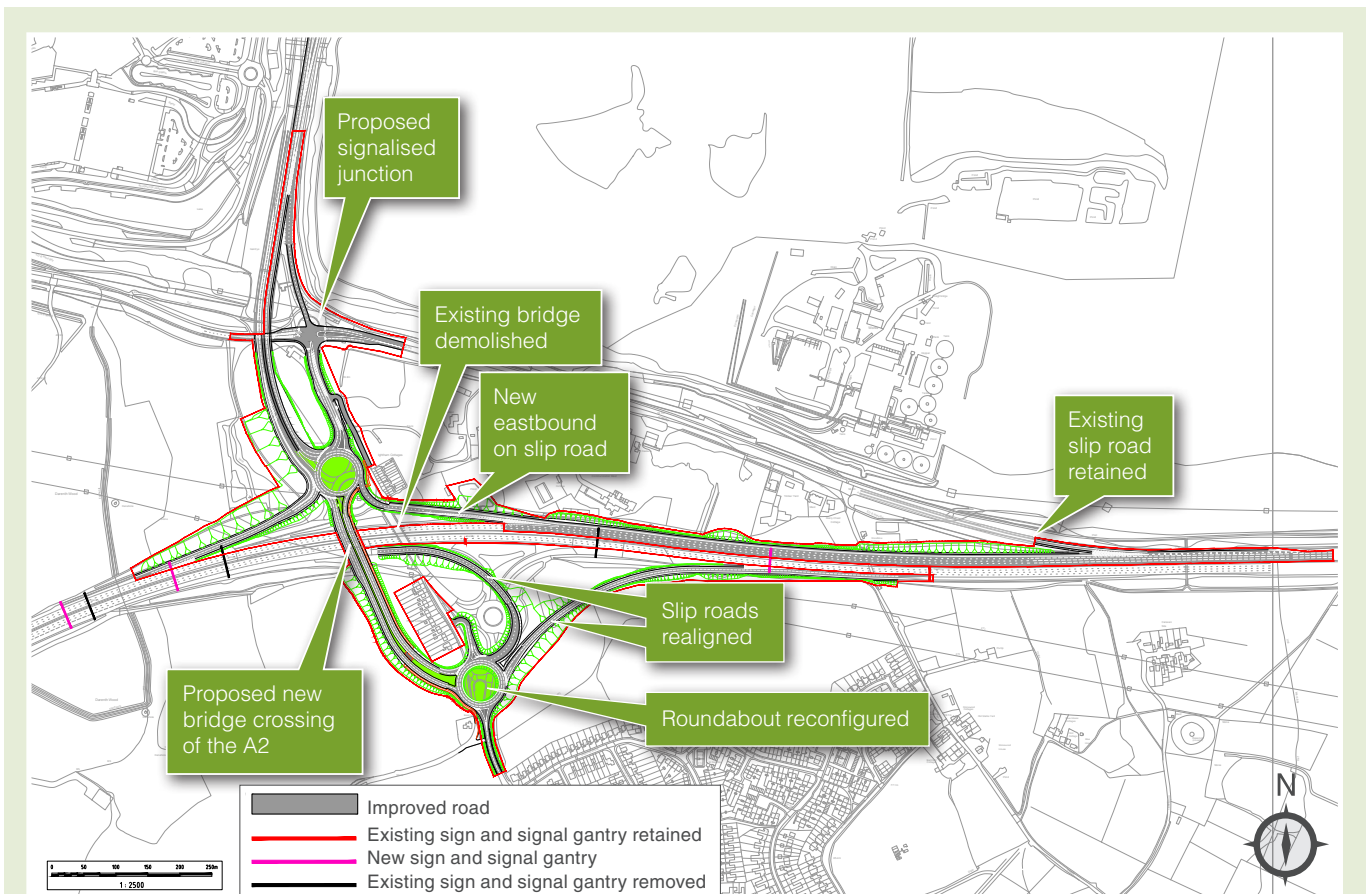
The longlist was then further assessed, culminating in a shortlist of 3 options at Bean (Options 3, 4b and 5) and the single option at Ebbsfleet. Some options on the longlist were rejected because on closer examination they did not perform well in terms of traffic movements or did not fulfill the scheme objectives.

Given the planned developments in the area, doing nothing at the 2 junctions would result in a huge increase in traffic and congestion and associated environmental problems at both junctions over the coming years.

The options on the shortlist have been appraised, resulting in a single option proposed for Bean (Option 5) and the single option proposed for Ebbsfleet (Option 1b).



**Bean Option 3 was rejected** because it would have an impact on Darenth Wood SSSI ancient woodland and does not provide any additional significant benefit compared to Bean Option 5 whilst costing an additional £20m. The option also requires the acquisition of three properties and impacts on a further three. It provides low value for money with a BCR of less than 1.7:1. The cost of Bean Option 3 with Ebbsfleet Option 1b of £145m exceeds the scheme budget.



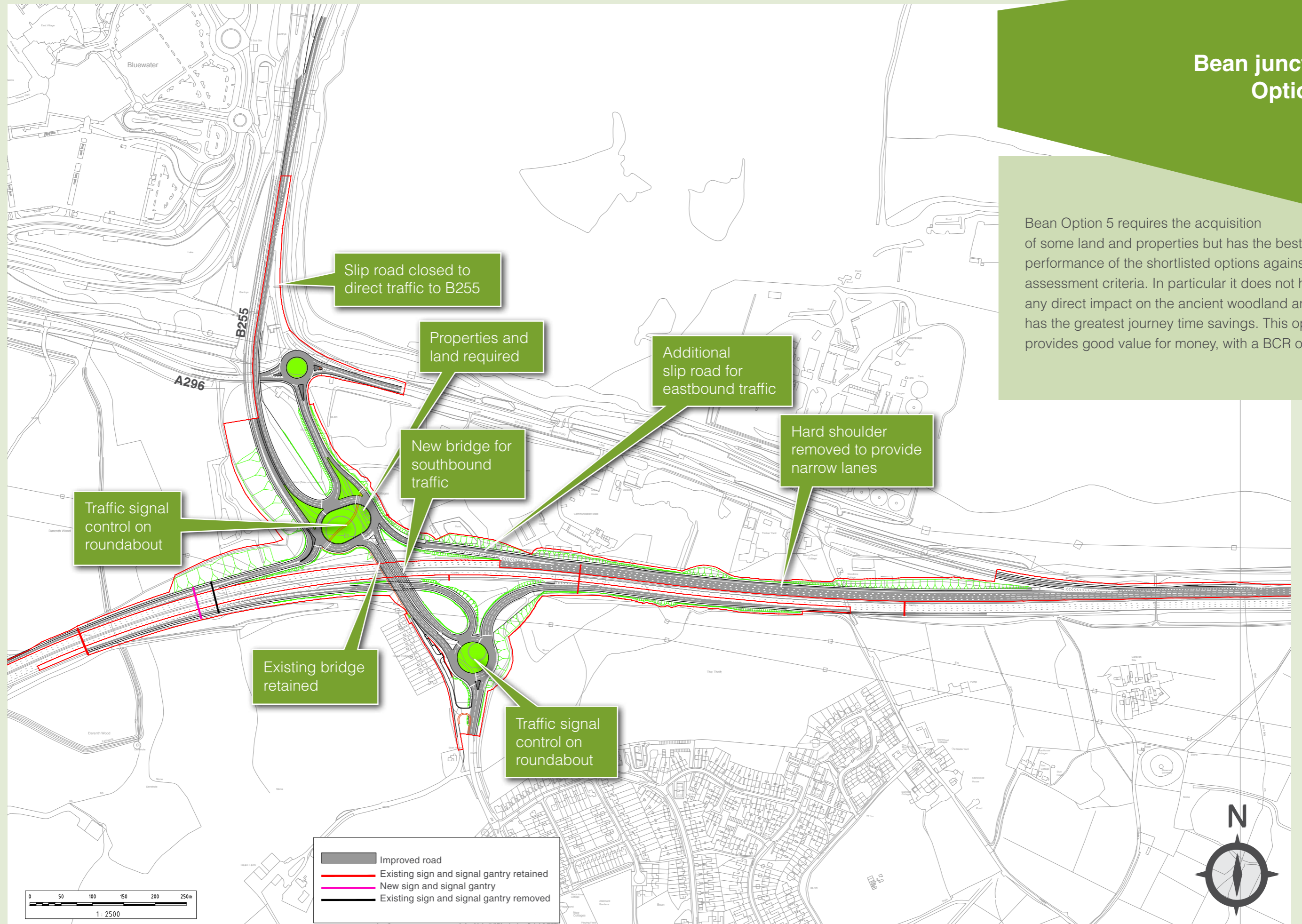
**Bean Option 4b was rejected** because, while it does not require the acquisition of any residential properties, it has the poorest overall performance against the assessment criteria and would have an impact on the Thrift ancient woodland. It provides very low value for money with a BCR of less than 1:1. The cost of Bean Option 4b with Ebbsfleet Option 1b is £143m which exceeds the scheme budget.



# Option we want your views on

## Bean junction Option 5

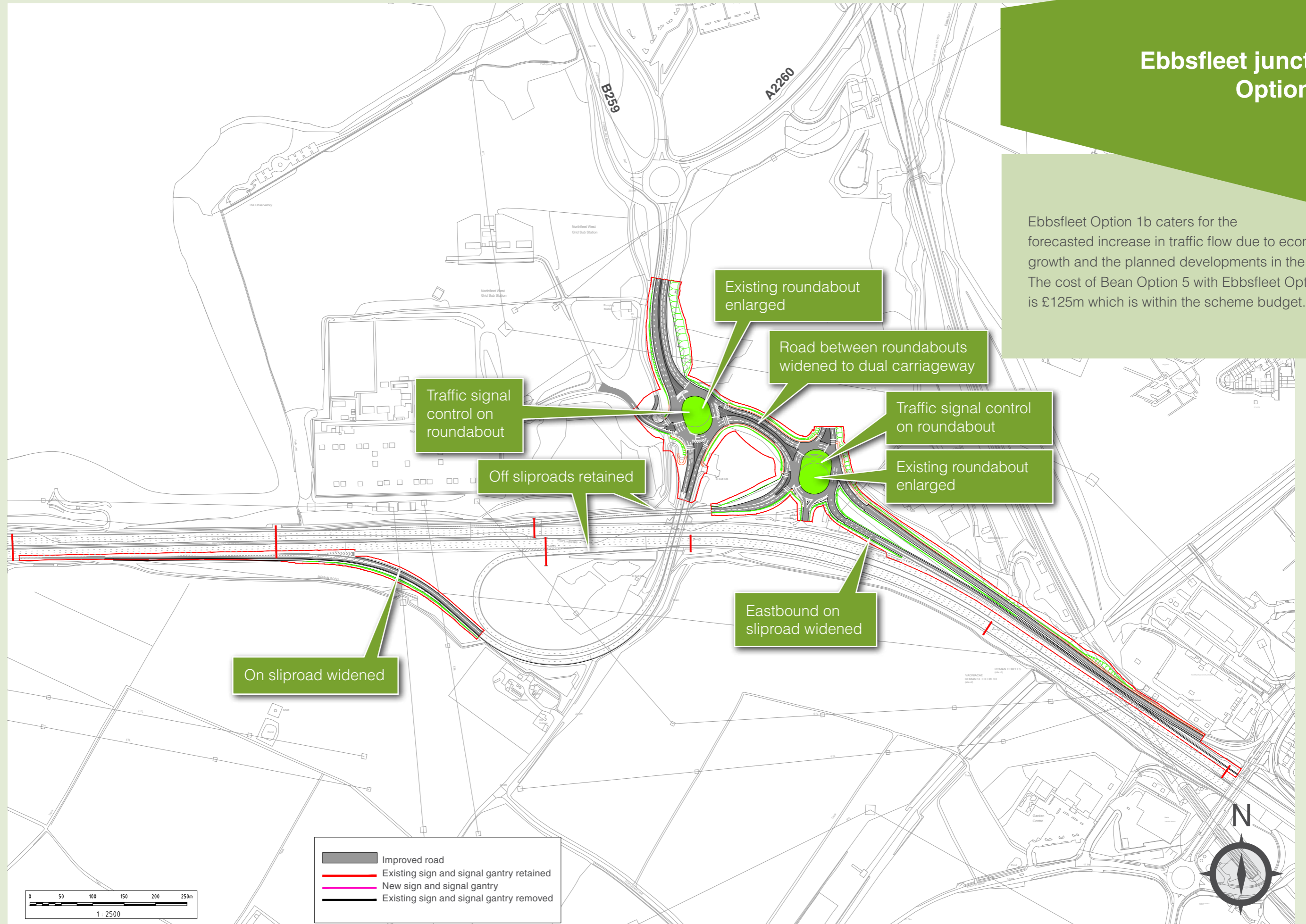
Bean Option 5 requires the acquisition of some land and properties but has the best overall performance of the shortlisted options against the assessment criteria. In particular it does not have any direct impact on the ancient woodland and has the greatest journey time savings. This option provides good value for money, with a BCR of 2.1:1.



# Option we want your views on

## Ebbsfleet junction Option 1b

Ebbsfleet Option 1b caters for the forecasted increase in traffic flow due to economic growth and the planned developments in the area. The cost of Bean Option 5 with Ebbsfleet Option 1b is £125m which is within the scheme budget.



The performance of the proposed Bean Option 5 with the proposed Ebbsfleet Option 1b is summarised in the table below:

Benefit and impacts of the proposed scheme	Bean Option 5 with Ebbsfleet Option 1b
Economic development	Wider economic benefit of £22m (an estimate of the beneficial knock on effects on business productivity and production resulting from the implementation of the scheme over a 60-year period).
Journey time savings	£129.7m The improvements provide additional capacity at each junction to smooth traffic flow, improve journey times and journey time reliability over a 60-year period.
Benefit Cost Ratio (BCR)	2.1:1 over a 60-year period.
Safety	Reduction of 11 accidents in which people are killed or seriously injured over 60-year period.
Air quality	It is unlikely that this scheme will lead to a significant impact on air quality but further assessment will be undertaken at the next stage.
Construction impact/duration	The programme allows for a construction period of 3 years but it is hoped to reduce this as the scheme is further developed. There will be significant traffic management during construction as the existing junctions are reconstructed.
Landscape and townscape impact	Overall slight impact but no direct impact on ancient woodland.
Land take – community	Acquisition of land and properties.
Non-motorised users	Existing routes will be maintained and crossing of the roads at the roundabouts will be facilitated by the introduction of traffic signals.
Scheme cost	£125m



## Relationship with other local projects

### Highways England’s proposed Lower Thames Crossing

The Lower Thames Crossing project is a separate proposal to the Bean and Ebbsfleet junction improvements although any decision about the Lower Thames Crossing will have an effect on future traffic on the A2. The Government is still to make a decision on the Lower Thames Crossing. The improvements at Bean and Ebbsfleet have been designed to accommodate whichever decision is made.

### London Paramount Entertainment Resort

Our proposals for the Bean and Ebbsfleet junctions are separate to any proposal currently being developed by the promoters of the London Paramount Entertainment Resort.

At this stage there has been no application for planning permission.

As we are a statutory consultee, we are working with London Paramount to understand how their proposed development will impact upon the roads we manage and how any potential effects might be mitigated.

London Paramount is also engaging with the local authorities and the community regarding the impact that this development might have on the local road network.

## Bluewater

The improvements that we have proposed for the Bean junction have been designed to accommodate the future traffic flows up to 2037 including known developments at the Bluewater shopping centre.

## We want to hear your views

Your views are important and we would like your feedback on the proposed scheme. You can find out more about the scheme on line at [www.highways.gov.uk/a2be](http://www.highways.gov.uk/a2be) or at the public consultation exhibitions where our project team will be on hand to answer your questions. The public exhibitions are being held as follows:

Date	Location	Time
Wednesday 18 January	Bean Youth and Community Centre High Street, Bean, DA2 8AS	17:30 - 20:00
Saturday 21 January		12:00 - 17:00
Saturday 28 January	Eastgate 141 Springhead Pkwy, Gravesend, DA11 8AD	12:00 - 17:00
Wednesday 1 February		13:00 - 20:00
Monday 20 February		13:00 - 20:00

You can also find further copies of this brochure at the following locations:

Location	Address
Bean Youth and Community Centre	High Street, Bean, DA2 8AS
Dartford Library	Central Park, Dartford, DA1 1EU
Greenhithe Library	London Road, Greenhithe, DA9 9EJ
Fleetdown Library	Swaledale Road, Dartford, DA2 6JZ
Longfield Library	49 Main Road, Longfield, Kent, DA3 7QT
Swanscombe and Greenhithe Town Community Hall	The Grove, Swanscombe, DA10 0GA
Swan Valley Library	Swanscombe Library Discovery Centre, Southfleet Road, Swanscombe, DA10 0BZ
Temple Hill Community Centre	Temple Hill Square, Dartford, DA1 5HY
Coldharbour Road Library	Northfleet, DA11 8AE
Hive House Library	Hive House, Northfleet, DA11 9DE
Gravesend Library	Windmill Street, Gravesend, DA12 1BE
Gravesham Borough Council	Civic Centre, Windmill Street, Gravesend, DA12 1AU
Maidstone County Hall	County Hall, Maidstone, ME14 1XQ
Stone Pavilion	Hayes Road, Stone, Greenhithe, DA9 9DS



## How to give us your views:

- Visit our website and fill in the online questionnaire at [www.highways.gov.uk/a2be](http://www.highways.gov.uk/a2be)
- Email us: [A2BeanandEbbsfleetJunctionsImprovements@highwaysengland.co.uk](mailto:A2BeanandEbbsfleetJunctionsImprovements@highwaysengland.co.uk)
- Write to us: **Freepost A2 Bean & Ebbsfleet junction improvements**
- Call **0300 123 5000** (24 hours).

The closing date for submitting feedback is **11.45pm on 1 March 2017**.

Your feedback and comments must be received by this deadline so that we can consider your response. We will not be able to respond to individual feedback but we will review and consider all comments received and acknowledge receipt of the response at the end of the consultation.

## How we use your feedback

All views and comments received will help us to:

- Make sure potential impacts on the community and environment have been fully considered
- Ensure the final scheme design is updated with all relevant responses where applicable
- Ensure the final environmental statement takes into account impacts or mitigation measures that you have told us about
- Record how we have considered feedback to develop the scheme further in our consultation report

## What happens after the public consultation

Following our normal procedures we will analyse all feedback and produce a consultation report which informs the preferred route. We will then develop detailed proposals for the scheme. This will include surveys and investigations to allow us to design the proposals in more detail. When the detailed designs are complete there will be another opportunity to have your say in a statutory consultation.

After this second consultation we will submit a planning application to the Planning Inspectorate. This is called the Development Consent Order process. We are required to undertake this for all projects of this nature, known as Nationally Significant Infrastructure Projects. The Development Consent Order application will be examined by the independent Planning Inspectorate, who will ask for representations from interested parties. After the examination, the Planning Inspectorate will make a recommendation to the Government which makes the final decision on the scheme. We will only be given consent to construct the scheme if the Development Consent Order is granted. Consent will also allow compulsory purchase of any land required.

## Scheme milestones

### Summer 2017

After considering your feedback alongside that of our stakeholders and partners we will produce a consultation report which will inform our decision on a preferred route.

### Winter 2017/18

Statutory public consultation on the preferred route.

### Summer 2018

We will submit a planning application which includes the final consultation report to the Planning Inspectorate. This is called the Development Consent Order process.

### 2018-2019

The Planning Inspectorate will evaluate the scheme.

### 2019/20

The Planning Inspectorate will make a recommendation to the Government, which will decide whether to give the scheme consent.

### 2020

If planning consent is granted then construction starts.

### 2022/23

Scheme opens for traffic.

If you need help accessing this or any other Highways England information, please call **0300 123 5000** and we will help you.

## Contact us

Please complete the A2 Bean and Ebbsfleet junction improvements consultation questionnaire.

You can also contact us as follows:

- Visit our website and fill in the online questionnaire at **[www.highways.gov.uk/a2be](http://www.highways.gov.uk/a2be)**
- Email us:  
**[A2BeanandEbbsfleetJunctionsImprovements@highwaysengland.co.uk](mailto:A2BeanandEbbsfleetJunctionsImprovements@highwaysengland.co.uk)**
- Write to us: **Freepost A2 Bean & Ebbsfleet junction improvements**
- Call **0300 123 5000** (24 hours).

The closing date for submitting feedback is **11.45pm on 1 March 2017**.

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Highways England Creative S160533

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