

CRAWLEY BOROUGH LOCAL PLAN EXAMINATION

Crawley Borough Council Response to Inspector's
Matters, Issues and Questions

Matter 6: Infrastructure Provision, Implementation and
Monitoring

February 2015



CBC/013 Matter 6 Infrastructure Provision, Implementation and Monitoring February 2015

Issue: Whether the CBLP is sufficiently proactive and effective to ensure timely delivery of its proposals and the necessary infrastructure.

CBC/013 Matter 6: Infrastructure Provision, Implementation and Monitoring

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Issue: Whether the CBLP is sufficiently proactive and effective to ensure timely delivery of its proposals and the necessary infrastructure.

6.1 Have the viability implications of providing a range of infrastructure services been properly taken into account in policy IN1? Is the “severely detrimental impact” test appropriate in determining whether the demands placed by development on infrastructure are acceptable?

- 6.1.1 Policy IN1 sets out the principles towards the provision and protection of infrastructure in the town and provides a policy background to the Infrastructure Plan¹. This sets out an assessment of the provision of infrastructure in Crawley along with the plans of the infrastructure providers and how they are taking into account the impact of development in the town in their future programmes. The Infrastructure Plan was prepared in liaison with the infrastructure providers. The funding of infrastructure improvements depends on the infrastructure in question and whether the provision is on or off site.
- 6.1.2 The viability work² undertaken to assess the viability of SHLAA sites and the preparatory work to support the setting of the CIL charging rates makes some allowance for on-site infrastructure and mitigation. The standard construction cost rates adopted in the viability assessment based on advice from Gleeds are considered to cover the normal costs of housing construction including on site infrastructure. In the viability update, there is also an allowance of £1,000 per dwelling for site specific S106 costs. The work also indicates what CIL charge is likely to be viable to help fund infrastructure. The CIL charging schedule will be the subject of its own examination but the viability work indicates that a rate of £100 m² for residential uses and £80 per m² for retail is viable, together with a rate of £20 per m² within an identified airport zone for B1, B2 and B8. The proposed CIL rates have taken into account the overall viability of development. This is likely to generate CIL revenues of approximately £9 million to help fund infrastructure. The CIL Infrastructure Delivery Schedule³ shows that the critical infrastructure required to deliver the Local Plan development proposals can be met through a contribution of CIL and other anticipated funding.
- 6.1.3 Any development can have an impact on infrastructure and the use of the “severe detrimental impact” test aims to provide an indication of the level of impact that would be a cause for concern. Through the preparation of the Infrastructure Plan, the infrastructure providers have been advised of the level of development in the town that their future plans and proposals have and should address. Overall, the Infrastructure Plan and the assessment it provides of infrastructure provision in Crawley indicates that the town has a good level of provision of many forms of infrastructure and no fundamental barriers to the scale of the development have been identified. The wording of Policy IN1 helps ensure that this remains to be the case.

¹ LP005: Crawley Infrastructure Plan (2014) CBC

² LP008: Crawley Borough Council Community Infrastructure Levy and Affordable Housing Viability Assessment (2013) Nationwide CIL Service; and LP008b: Crawley Borough Council Community Infrastructure Levy and Affordable Housing Viability Assessment Update (2015) Nationwide CIL Service

³ Crawley Infrastructure Delivery Schedule (2015) CBC

6.2 Is the provision of adequate water and sewerage infrastructure a constraint to the level of development proposed in the CBLP, and if so, is this addressed satisfactorily in the Plan?

- 6.2.1 The council considers that the provision of adequate water and sewage infrastructure is not a constraint to the level of development proposed in the CBLP, providing that both the council and infrastructure providers continue to work together to ensure that development set out in the Local Plan 2015-30⁴ is supported by the necessary infrastructure in the right place at the right time.
- 6.2.2 During all stages of the Local Plan process the council has proactively engaged with the water and sewage infrastructure providers to ensure that there are no unknown constraints to development and that there is adequate provision for infrastructure to meet development set out in the Local Plan up to 2030. The borough council has examined the issue of water supply and sewage provision in detail through the preparation of the various stages of the Water Cycling Scoping Study and Update⁵. The outcomes of this work together with jointly agreed position statements with the infrastructure providers is reflected in the Infrastructure Plan.
- 6.2.3 As part of this process all Infrastructure providers within Crawley were asked in August 2014 to provide a statement on the latest position. The responses of Southern Water and Thames Water are included as (Appendix A).
- 6.2.4 Southern Water's response to the letter sent in August explains that there is no overall limit, as far as water supply goes, on the total scale of development across the borough or at individual sites, however it is likely that new infrastructure will be required. The response goes on to state that even if existing capacity is insufficient in the immediate vicinity of the site, this is not a constraint to development, provided it connects to the local water supply. Therefore, with regard to this statement, the provision of adequate water is not a constraint to development.
- 6.2.5 Southern Water in their representation on the Submission Local Plan⁶ raised site specific issues at two housing sites. However, these two sites, Forge Wood and Southern Counties already have planning permission. These issues are being addressed on site with developers.
- 6.2.6 Thames Water in their response in September 2014 (see Appendix A) indicated that Crawley's sewage treatment works is likely to meet growth demands to 2021 following recent capacity upgrades and is currently anticipated to reach capacity between 2021 and 2026. Further expansion would be possible, possibly beyond the existing site boundary but this may not be necessary depending on the technologies available at the particular time. Thames Water would look to promote any future upgrades/extensions to Crawley STW within its draft business plan sometime

⁴ LP001a: Crawley Borough Local Plan Modifications Draft (November 2014) CBC

⁵ LP107: Gatwick Joint Water Cycle Scoping Study (2010); LP102: Gatwick Sub-Region Water Cycle Study (2011) Entec UK Limited; and LP101: Crawley Water Cycle Study Update (2013) CBC and Amec Environment and Infrastructure UK Limited

⁶ REP/058: Southern Water

between AMP7 (2020-2025) and AMP8 (2025-2030). Further discussions will take place with Thames Water to ensure that capacity is provided beyond 2021.

- 6.2.7 Both Southern Water and Thames Water have a statutory duty to serve new development and both are committed to providing the right infrastructure in the right place at the right time in collaboration with developers. Developers are required to demonstrate that there is adequate capacity both on and off site to serve a new development and that this will not lead to problems for existing users. However, it is acknowledged that the Local Plan has a role to play in ensuring that the appropriate infrastructure is delivered.
- 6.2.8 The council has and will continue to work closely with water and sewage providers to ensure that the timing of development is co-ordinated with the provision of necessary infrastructure. A number of issues do need to be monitored including a potential need for new sewage infrastructure towards the end of the Plan period. However, this is acknowledged in the Local Plan and is not considered to be a constraint to the level of development proposed in the CBLP, because of the timescales involved, a solution will be in place; possibilities exist to expand the Sewage Treatment Works, and will need to be reflected in Thames Water's future plans take into account the latest technology and information available at that time.

6.3 Is the transport modelling undertaken during plan preparation in support of the transport strategy in policy IN3 robust and complete? Does the Plan demonstrate how the necessary key transport infrastructure will be funded and delivered?

- 6.3.1 A transport evidence base study⁷ of Crawley has been undertaken to examine the impacts of proposed allocations in the Local Plan and to develop an appropriate and proportional transport strategy to effectively mitigate these impacts in compliance with the NPPF⁸. The study considered a combination of infrastructure and non-infrastructure measures for sustainable transport modes and highway junction capacity. The study took place in two stages and was commissioned by Crawley Borough Council (CBC) with West Sussex County Council (WSCC) acting as technical advisor and providing use of transport models.
- 6.3.2 The first stage concentrated on the impact of different levels of assumed growth in housing and employment across Crawley borough without considering site specific locations. The purpose of this approach was to inform CBC on the broad implications of different levels of growth and the extent of additional congestion which would need to be addressed. This stage of the study used the West Sussex County Transport Model (WSCTM), a strategic model representing the main roads and inter-urban public transport routes.
- 6.3.3 The second stage of the study considered site specific development locations using a preferred strategy and an alternative strategy for which sites should be taken forward. These strategies drew on the results of the Stage 1 study as well as other evidence assembled by CBC on other topic areas.
- 6.3.4 For the Stage 2 study, WSCC, CBC and their transport consultant, Amey, agreed that a more detailed transport model was needed than that used for the Stage 1 study, but that it was appropriate to extend the study area beyond the boundaries of the County Council's existing Crawley Transport Model (CTM). Accordingly, Amey developed a hybrid model for the study placing the detailed CTM network for Crawley and Gatwick within the strategic WSCTM framework. The model covers a wide study area and examines the urban area in greater detail proportionate to the transport impacts from proposed development.
- 6.3.5 The hybrid model has been calibrated and validated to acceptable standards against DMRB criteria, to provide a level of accuracy in traffic assignment and simulation appropriate for plan making. This enabled wider impacts of the development strategies to be considered but, due to the WSCTM covering the AM peak hour only, resulted in the study only modelling directly the AM peak. WSCC considers that, although there are some differences in journey purpose proportions between the two peaks, the overall levels of traffic demand in Crawley and the surrounding area are similar between the two peaks and that the modelling has successfully identified

⁷ LP119: Transport Modelling (2012) Amey Consulting; and LP120: Transport Modelling (2014) Amey Consulting

⁸ National Planning Policy Framework, Section 4, notably paragraphs 34 and 35 (2012) DCLG

the correct locations and level of infrastructure and other transport provision, which would be required for the development strategies examined.

- 6.3.6 In consultation with the Highways Agency, further work has been undertaken by Amey for CBC to examine PM peak traffic patterns and impacts at key junctions where infrastructure improvement proposals will need to reflect tidal demands in both peaks. The purpose of this work has been to increase the level of assurance regarding the performance and deliverability of the outline designs of transport mitigation schemes. Further work on refining the designs of such measures will be required from developers in support of planning applications as sites currently proposed for allocation are taken forward. However, whilst retaining compliance with the NPPF criteria, this should not change the scope or level of cost of infrastructure and support required to an extent where the viability and deliverability of development are affected. See Appendix B for the recent correspondence between Amey Consulting and the Highways Agency in relation to the emerging outcomes of this additional modelling.
- 6.3.7 WSCC considers that the transport evidence base from the Local Plan studies and addendum work should provide confidence that the identified transport strategy will effectively mitigate the forecast net additional transport demands from the submitted development plan, whilst ensuring that NPPF criteria are met.
- 6.3.8 The transport modelling work⁹ identifies five road junctions which require improvement as a result of the development proposed in the Local Plan. Indicative proposals are provided of the nature of the improvements which would be required to mitigate the impact. The improvements required are amendments to existing junctions rather than the construction of new junctions. The C2C Local Economic Partnership Local Transport Board has allocated £18 million towards transport improvements in Crawley. This, together with the anticipated revenue from CIL, is considered more than sufficient to ensure that these required improvements as well as sustainable transport measures including bus priority schemes, modal interchange and improvements to walking and cycling facilities can be delivered. These funds will also help address some of the capacity issues arising from background traffic growth. Appropriate project management arrangements have been set up to manage the allocation and spending of the LEP monies in Crawley with involvement from both CBC and WSCC.

⁹ LP120: Transport Modelling, Table 12, p40 (2014) Amey Consulting

6.4 Is it appropriate and consistent with NPPF that parking standards (policy IN4) are established in Supplementary Planning Documents? Do the current standards accord with national policy and guidance?

- 6.4.1 Policy IN4 requires development to provide the appropriate amount of parking to meet its needs and the standards to help adhere to this are set out in Supplementary Planning Document¹⁰ (SPD). The inclusion of the parking standards as an SPD provides greater flexibility than inclusion within the Plan itself. It is considered to be in line with the guidance on SPD's in the NPPF¹¹ which outlines that SPD's should be used where they can help applicants make successful applications and should not be used to add unnecessarily to the financial burdens of development. Parking standards are an accepted requirement of development and therefore do not add an unanticipated or unfair financial burden.
- 6.4.2 The current standards, adopted in 2008, are still considered appropriate and act as a guideline for development. Although prepared at a time when maximum standards were the accepted policy approach, they have been applied flexibly since this policy direction at a national level was removed. The standards remain a good indication of the amount of parking which is considered appropriate for particular types of development. The inclusion of the standards as an SPD allowed the move away from maximum standards to be applied in a flexible way without being contrary to the Local Plan. In applying the standards flexibly, the council has taken into account the principles of setting parking standards outlined in the NPPF¹². In addition, should there be any further changes in the approach to parking standards, it would be easier to adopt new standards through an SPD rather than the Local Plan.

¹⁰ Planning Obligations and S106 Agreements Supplementary Planning Document (August 2008) CBC

¹¹ National Planning Policy Framework, para 153 (2012) DCLG

¹² National Planning Policy Framework, para 39 (2012) DCLG

6.5 Does the Monitoring and Implementation section provide a robust and effective mechanism for measuring the timely delivery of the objectives and policies of the CBLP?

- 6.5.1 The Monitoring and Implementation section in the Plan sets out the primary indicators identified to monitor the successful delivery of the Local Plan Objectives and the Policies. This is a summarised position for the purposes of brevity within the Plan document itself. The Local Plan's 21 objectives build on the spatial elements of the Crawley 2030 Vision and the combination of Plan Policies identified to support each of the Plan objectives are set out beneath each of the objectives in turn.
- 6.5.2 The full details of the Local Plan monitoring is established in the Monitoring and Implementation Framework¹³ prepared to support the continual monitoring of the effectiveness of the Plan and the Policies in accordance with the regulations. This document provides the detailed information upon which the Authority's Monitoring Report will be based.
- 6.5.3 The council has monitored the progress of the adopted Core Strategy on an annual basis and reported this in the Annual Monitoring Report for each of the previous monitoring years¹⁴. Due to the changes in the regulations this will no longer need to be published and submitted to the Secretary of State on 31 December as had previously been the case. Instead, it is expected that, whilst the council will continue to work toward producing a monitoring report, collating the information from the monitoring indicators and the reporting of the most up-to-date information will be published as early as reasonably possible when it becomes available.
- 6.5.4 The Local Development Scheme (LDS)¹⁵ sets out the procedures in relation to monitoring and review for the Local Plan. This confirms that the Local Plan will be continually monitored and a report will be published annually to ensure the policy objectives are being implemented. If monitoring indicates that the Local Plan is not being implemented or circumstances change or new planning policy guidance emerges, the Local Plan may be reviewed. This is in addition to the council's approach in relation to the implications for the Local Plan review due to future decisions for Gatwick Airport.

¹³ LP141: Crawley Local Plan Monitoring and Implementation Framework (2015) CBC

¹⁴ LP041 – LP045: Crawley Borough Council Annual Monitoring Report 2008/09 – 2012/13 (2010 – 2014)

¹⁵ LP040: Crawley Borough Council's Local Plan Local Development Scheme 2013 – 2016, p10-11 (2014) CBC

6.6 In determining the Monitoring Indicators, has regard been paid to SMART objectives (specific, measurable, attainable, relevant and time-bound) or some other system of setting and measuring targets? For certain key policy monitoring indicators, should the CBLP set out specific targets and identify the remedial actions to be taken if policies are not being successfully implemented?

- 6.6.1 The monitoring indicators and relationship between the Crawley 2030 Vision, the Local Plan Objectives and the Local Plan policies is set out in the Local Plan's Monitoring and Implementation section. As explained in paragraph 6.5.1 above this is a summarised position rather than a comprehensive framework for monitoring the Local Plan for the purposes of the 2012 Regulations¹⁶. The Implementation and Monitoring Framework establishes the monitoring framework to accompany the Local Plan once adopted¹⁷.
- 6.6.2 In identifying the indicators for measuring the effectiveness of the Plan strategy and policies, consideration was given to each of the SMART objectives. This was undertaken with the corporate policy team for the council, providing expert advice in relation to ensuring the indicators were fit for purpose and robust: in particular, whether they were specific, measurable, attainable, relevant and time-bound.
- 6.6.3 Initially, the full range of monitoring indicators currently used to measure implementation of the adopted Core Strategy policies were subject to a comprehensive review and assessment as part of the considerations for a proportionate and effective approach to monitoring the new Local Plan once it becomes the council's adopted planning policy. This process identified a number of indicators which no longer had data being gathered to support them and indicators which did not appear to relate directly to the purpose of the Policy.
- 6.6.4 Following this, each policy was considered on its own merits and the intended outputs from each policy were identified. This ensured that the indicators would be specific and relevant to the purpose of the Policy and allow for areas of concern, under-delivery or ineffective implementation to be established at the earliest opportunity. The indicators primarily focus on the gathering of quantitative data, which ensures it is measurable, and for the use of standardised information which would continue to be available over the life of the Plan to allow for comparable, year-on-year analysis to be undertaken during the review process.
- 6.6.5 The indicators were then subject to scrutiny to ensure the data required would be possible to collect, primarily from information available to the local planning authority directly through the planning services offered; minimising the reliance on external bodies and other council departments' resources for collection of data. This ensured the indicators were attainable.

¹⁶ The Town and Country Planning (Local Planning) (England) Regulations 2012, Regulation 34

¹⁷ LP141: Crawley Local Plan Monitoring and Implementation Framework, Section 1, p2-3 (2015) CBC

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6.6.6 The Implementation tables set out in the Monitoring and Implementation document¹⁸ provide targets, allowing for attainable goals and timeframes. As established by the council's adopted Local Development Scheme¹⁹ and paragraph 1.37 of the Local Plan²⁰ if monitoring indicates that the Local Plan is not being implemented or circumstances change or new planning policy guidance emerges, the Local Plan may be reviewed. In particular, it is critical that the council maintains a five-year supply of housing and the Housing Trajectory will be maintained and updated internally monthly, as the information becomes available to the local planning authority from the building regulations records, and published on 1 April and 1 September each year, to ensure this provides the most recent position for the borough regarding anticipated housing delivery. Similarly, in relation to delivery against the affordable housing requirement, this is a council priority which is monitored and promoted by the Housing Enabling Manager. Other policies considered locally-critical for ensuring the Local Plan meets the needs of Crawley over the Plan period include the delivery of land for economic growth (Policy EC1) and the implementation of the sites within the town centre (Policy EC6). These will also be closely monitored to ensure they are adequately implemented or will trigger a review of the Plan.

¹⁸ LP141: Crawley Local Plan Monitoring and Implementation, Section 3 (2015) CBC

¹⁹ LP040: Crawley Borough Council's Local Plan Local Development Scheme 2013 – 2016, p10-11 (2014) CBC

²⁰ LP001: Crawley Borough Submission Local Plan (September 2014) CBC

APPENDIX A: Responses to Letters Sent in August 2014.

05 September 2014
LDF Responses



Sent by email to: Bethany.Lester@crawley.gov.uk

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Dear Sir / Madam

CRAWLEY BOROUGH COUNCIL LOCAL PLAN 2015-2030 – INFRASTRUCTURE POSITION STATEMENT

Thank you for your letter dated 4th August regarding the above.

Thames Water Utilities Ltd (Thames Water) Property Services function is now being delivered by Savills (UK) Limited as Thames Water's appointed supplier. Savills are therefore pleased to respond to the above consultation on behalf of Thames Water in relation to their statutory undertakings.

As you will be aware, Thames Water are the statutory sewerage undertaker for the Borough and are hence a 'specific consultation body' in accordance with the Town & Country Planning (Local Planning) Regulations 2012. We have the following comments on behalf of Thames Water:

Comments on Sewerage/Wastewater Infrastructure capacity:

Sewerage Network

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Developers will be required to demonstrate that there is adequate capacity both on and off the site to serve the development and that it would not lead to problems for existing users. In some circumstances this may make it necessary for developers to carry out appropriate studies to ascertain whether the proposed development will lead to overloading of existing water & sewerage infrastructure. Where there is a capacity problem and no improvements are programmed by the water company, then the developer needs to contact the water company to agree what improvements are required and how they will be funded prior to any occupation of the development.

Sewage treatment

Crawley Sewage Treatment Works has recently been upgraded and has a capacity for a total Population Equivalent (PE) of approximately 170,000. Thames Water's forecasting predicts that the will reach that limit between 2021 & 2026 (from a current PE of approx 153,000).

It is anticipated that Crawley STW will not meet the demand forecasted to 2030. Upgrades of Thames Water's assets will therefore be required.

Further expansion of the Crawley STW should be possible subject to land availability and STW consent permissions being granted by the Environment Agency. Land availability at Crawley STW is reaching its limits and it may be necessary to extend beyond the sites boundary, but this would need further confirmation nearer the time as technologies are changing all the time, it may be able to accommodate upgrades which require a smaller foot print.

Nonetheless, consultations have taken place with Gatwick Airport regarding their proposal of a new runway. They have been made aware of what capacity is available and when upgrades to Crawley STW are forecasted.

Thames Water would look to promote any future upgrades/extensions to Crawley STW within its draft business plan sometime between AMP7 (2020-2025) and AMP8 (2025-2030), which are subject to funding approval by Ofwat.

We trust the above is satisfactory, but please do not hesitate to contact me if you have any queries.

Yours sincerely



David Wilson BA (Hons), BTP, MRTPI
Associate Director Planning

SOUTHERN WATER

Dear Beth

In response to the 'At Crawley Sites Review', Southern Water has a statutory duty to serve new development, and is committed to providing the right infrastructure in the right place at the right time in collaboration with developers and with support from the planning system through planning policies and planning conditions. Capacity above that which is currently available can be provided in parallel with development, providing there is good forward planning. There is no overall limit, as far as water supply goes, on the total scale of development across the borough or at individual sites. However, it is likely that new infrastructure will be required.

We have a dedicated team for Local Plan enquiries. The email address is planningpolicy@southernwater.co.uk. The postal address for Local Plans is Sarah Harrison, Regional Planning, Southern Water, Southern House, Yeoman Road, Worthing, West Sussex, BN13 3NX.

This team responds to Local Plan consultations, and arranges for site by site capacity checks once site options have been refined and published in a draft development plan document. We require precise location information and number of dwellings to carry out these checks. These checks determine whether existing capacity is sufficient to serve each site, and will help to formulate planning policies to secure new or improve infrastructure in parallel with the development.

If existing capacity is insufficient in the immediate vicinity of the site, this is not a constraint to development provided it connects to the local water supply system at the nearest point of adequate capacity. The precise location of the nearest point of capacity will need to be investigated when the development comes forward. Planning policies and conditions can be put in place to ensure the timing of development is co-ordinated with provision of necessary infrastructure.

The adopted Borough Local Plan will inform Southern Water's investment planning. Adoption provides the planning certainty required to support investment proposals to Ofwat, the water industry's economic regulator. Southern Water is currently going through the price review process with Ofwat, this will decide the investment programme in the period to 2020. There will be another price review in 2019, covering the investment period 2020 to 2025.

Strategic infrastructure such as additional water resources can be planned and funded through the price review process, and co-ordinated with new development. However, local infrastructure, should be funded by the development if this is specifically required to service individual development sites. The mechanism by which the development can provide the infrastructure required to serve it is to connect to the water supply system at the nearest point of adequate capacity. This may require off-site infrastructure if the nearest point is not located within the immediate vicinity of the site.

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We look to the planning authority to ensure through planning policies and planning conditions that development is co-ordinated with provision of infrastructure and not permitted to proceed unless it connects to the water supply system at the nearest point of adequate capacity, to ensure levels of service are maintained to both new and existing customers.

I hope that this answers your queries.

Kind regards

Sarah Harrison

Planning Analyst

Southern Water

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APPENDIX B: CORRESPONDENCE WITH HIGHWAYS AGENCY

Brigden, Elizabeth

From: Lynn, Timothy <Timothy.Lynn@amey.co.uk>
Sent: 24 February 2015 12:27
To: elizabeth.cleaver@highways.gsi.gov.uk
Cc: peter.phillips@highways.gsi.gov.uk; Brigden, Elizabeth; guy.perfect@westsussex.gov.uk; Garside, Wayne
Subject: CO03022434A Crawley Local Plan Transport Strategy: Impact Assessment for SRN at PM Peak 2029

Elizabeth

Amey has undertaken some further tests using the Crawley (hybrid) transport model, for Crawley Borough Council, to respond to the Highways Agency's concerns regarding the likely impact of the proposed Crawley Local Plan (LP) on the strategic road network (SRN). This note summarises our main findings from these tests, to provide the HA with additional evidence of potential LP impact.

We understand that there's a deadline of **5pm Friday 27th February** for submission of written statements to the Programme Officer for the Crawley Local Plan Examination. It would therefore be much appreciated if you could give a response to this note, to Crawley BC, as soon as possible before this deadline, please.

1. Agreed Tasks

Our agreed tasks in response to HA / CBC discussions were broadly as follows:

- Review the accuracy of the weekday AM peak base 2008 Crawley highway model at the M23 junctions.
- Transpose the AM peak 2029 forecast scenario models (Reference / Preferred / Alternative), factor resulting trip matrices to PM traffic level and check development trips.
- Run PM 2029 synthesised models and analyse outputs for stress points requiring remedial intervention, on HA strategic road network (SRN).
- Review performance of AM scenario mitigation scheme at M23J9 with AM and PM traffic patterns.
- Identify and test potential remedial solutions to PM stress points on SRN and local road network.
- Check outline remedial scheme layout at M23J9 for compliance with basic design and safety standards.
- Check adequacy of M23 motorway slip road layouts against standards for the 2029 forecast flow volumes.
- Prepare broad outline construction cost estimates for M23J9 remedial schemes.

I have provided below a commentary on the outcomes from the above tasks.

2. AM peak Crawley highway base 2008 model accuracy and trip matrix development:

The accuracy of the hybrid AM 2008 base year Crawley highway model is generally good, when compared with WebTAG flow validation criteria at the strategic M23 junctions.

Considering the section from south of M23J9 to south of M23J11, which was specifically validated in the original Crawley Town Centre Model (CTCM), the overall proportion of modelled road links with GEH <5.0 was acceptable, at 85%.

M23J9 itself was less accurately modelled, because it lay outside the area of detailed validation in the CTCM and provided no counts with which to shape the hybrid model. At M23J9, comparison of HA TRADS data with the hybrid base model, shows that the proportion of modelled road links with GEH <5.0 was poor, at 38%. We don't have similar TRADS data with which to assess the model accuracy at M23J9a.

Considering the whole M23 section, from south of M23J8 to south of M23J11, the overall proportion of modelled road links with GEH <5.0 was 73%. This falls below the threshold of acceptable accuracy specified by WebTAG. To overcome the shortfall in AM model accuracy at M23J9, we have applied an appropriate uplift of 9% to all AM and synthesised PM flows used to test the operation of the junction.

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Conclusion – Overall, we consider that the hybrid AM Crawley modelling of the SRN, together with the localised uplift applied to modelled flows at M23J9, is sufficiently accurate to give a robust assessment of LP impact on the M23.

‘Matrix estimation’ was applied in SATURN to create the hybrid CTCM / WSCTM 2008 base for the Local Plan Transport Study. The key details of this process are summarised below.

In order to make best use of existing highway models for both local detail in Crawley town and also strategic interaction across West Sussex, we transplanted the core CTCM network, zoning and trip matrix into the West Sussex County Transport Model (WSCTM), having first removed the equivalent area from the WSCTM.

The source WSCTM matrix contained 391 zones (16 for Crawley Town). The matrix was modified as follows:

- 91 new zones were created within Crawley in the WSCTM, to represent the CTCM zoning system;
- Internal movements between the 16, coarse-level, Crawley Town Zones in the WSCTM were set to zero;
- Internal Crawley movements between the 91, fine-level, Crawley Town zones in the CTCM were transplanted into the WSCTM;
- Two-way movements between the existing 16 Crawley Zones and zones outside Crawley Town were retained from the WSCTM, but recoded to the updated zoning system using CTCM trip end distribution; and
- Matrix estimation techniques were applied to ensure that the new composite matrix gave assigned flows comparable with observed movements.

After the first step, whereby CTCM trips were substituted into the WSCTM, the overall matrix trip total increased by 5% from 147,300 to 155,100, reflecting the additional trip detail within the town.

Matrix estimation was then applied in a carefully controlled process, by:

- Running maximum internal iterations and estimation loops, to ensure convergence between modelled flows and observed counts; and
- Applying low matrix adjustment factor (maximum of 3.0), to discourage the estimation process from creating too many short-distance trips.

Conclusion – Overall, matrix estimation has enhanced the accuracy of modelled origin to destination movements, but with minimal change (<0.5%) to the total volume of trips. The highway trip totals before and after estimation were 155,100 and 155,350, respectively.

A check on model trip length distributions, before and after estimation, showed minimal change, with adjustments being spread evenly across all trip-length categories.

3. Assemble and check the synthesised PM 2029 forecast models:

We transposed and factored the AM 2029 model to a PM equivalent, for the Reference, Preferred and Alternative scenarios. This entailed a robust uplift of +12.5% on the AM transposed trip matrix movements, to represent the ratio in NTEM (6.2) of PM to AM averaged origin and destination trip ends, at 2029, for car drivers in ‘Crawley Main’ district.

We checked the synthesised PM trip patterns, at key Local Plan development sites, against an independent calculation of PM trips based on TRICS. This involved applying PM peak trip rates from TRICS to the proposed land-use characteristics at the key development sites. The results showed a reasonably close match, in terms of modelled and expected PM arrivals and departures, as follows:

Percentage difference of PM synthesised trips from predicted PM TRICS –

- | | | |
|------------------------|----------------|------------------|
| • Reference Case | Arrivals +7.3% | Departures -4.2% |
| • Preferred Strategy | Arrivals +1.6% | Departures -2.9% |
| • Alternative Strategy | Arrivals +8.1% | Departures -3.5% |

Conclusion – Overall, the synthesised PM 2029 development trip volumes were well within 10% of the predicted TRICS equivalent, indicating reasonable accuracy in the PM Crawley highway model.

4. Review of 2029 AM and PM modelled ‘stress’ points on SRN

After checking outputs from the AM and PM 2029 highway assignments, we identified points of significant network ‘stress’ (i.e. severe Ratio of Flow to Capacity – RFC) on the strategic road network. This followed the same approach as described in the ‘Crawley LPTS Stage 2 Report’ (August 2014).

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SRN Locations with AM or PM RFC >100% in all scenarios (Reference / Preferred / Alternative)

On the HA's SRN, there are two locations with stress in all scenarios for which no mitigation is proposed, because the network would be 'no worse off' with either the Preferred or Alternative Local Plan strategies than in the Reference case. These locations are:

- M23J11 in the AM and PM, in all scenarios; and
- M23J9a in the PM, in all scenarios (this was not stressed in the AM, in any scenario).

SRN Locations with AM or PM RFC >100% in all scenarios, but significantly worse in Preferred or Alternative

- There are no SRN locations where this situation is predicted to arise.

SRN Locations with AM or PM RFC >100% in Preferred or Alternative, but not in Reference

There is one location where remedial intervention may be required to accommodate the Local Plan alternative strategy and mitigate adverse stress, namely:

- M23J9 grade separated roundabout, in the AM alternative strategy, approaching from M23 n/b exit slip and southern bridge.

– This problem is assuming a 9% uplift on AM and PM modelled flows, to compensate for poor base validation.

Locations with AM or PM RFC <100% in all scenarios, but significantly worse in Preferred or Alternative

The criteria for selecting these stress points were – Reference RFC <85%; Preferred or Alternative RFC >85%; and increase from Reference with Preferred or Alternative of >5%.

- There were no SRN sites in this category.

Conclusion – There is not predicted to be any significant stress caused to the M23 SRN by the LP strategy, in the AM or PM peaks, except at M23J9 after uplifting modelled flows by 9%. This excess stress is in the alternative strategy only, in the AM, but not in the preferred strategy.

There is another factor that could dissipate the impact of the LP alternative strategy at M23J9. It is the expressed intention, from the potential developer of the Gatwick Junction employment site, to secure local highway access for the site to and from B2036 Balcombe Road. All transport modelling for the Crawley LP alternative strategy has assumed that all traffic associated with Gatwick Junction would use M23 and J9A. Clearly if a proportion of this traffic was displaced on to local roads, then the traffic impact on the SRN at M23J9A and J9 could be significantly reduced.

5. Check performance of AM remedial interventions at M23J9, with AM and PM 2029 traffic uplifted by 9%

A remedial scheme was previously proposed at M23J9 in the Crawley LPTS stage-2, for the AM alternative strategy at 2029. This mitigation scheme would clearly be needed with the AM flows uplifted by 9%. The mitigation scheme comprised the following:

- Widening of junction approach from M23 northbound exit to 3 lanes at signals;
- Widening of circulating carriageway past M23 northbound exit slip to 3 lanes; and
- Widening of westbound M23 exit towards M23J9a to 3 lanes, with merging from nearside down to existing 2 lanes, before Peeks Brook Lane bridge and with speed limit / downgrading from J9 to J9a section for safety; and
- Retention of 2-lane approach from southern bridge at M23 n/b exit slip signals.

The operation of this scheme has been assessed using a LINSIG detailed signal junction model, assuming a 90-second cycle time. In summary, the maximum RFC that are predicted in the LINSIG assessments for the remedial scheme are as set out below:

- M23J9 in the AM alternative strategy, approaching from M23 n/b exit slip and approaching from M23 southern bridge – RFC 80%; and
- M23J9 in the PM alternative strategy, approaching from M23 s/b exit slip and approaching from M23 northern bridge – RFC 98%.

For comparison, the equivalent performance of the remedial scheme with preferred strategy and reference case scenarios would be:

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- M23J9 in the AM preferred strategy, approaching from M23 n/b exit slip and approaching from M23 southern bridge – RFC 73%;
- M23J9 in the PM preferred strategy, approaching from M23 northern bridge – RFC 86%;
- M23J9 in the AM reference case, approaching from M23 southern bridge – RFC 72%; and
- M23J9 in the PM reference case, approaching from M23 s/b exit slip and approaching from M23 northern bridge – RFC 84%.

Conclusion – the assessments show that remedial scheme proposed for M23J9 should enable the whole junction to operate satisfactorily in the worst-case, alternative strategy Local Plan scenarios, with RFC below 100% in the AM and PM peaks at 2029.

6. Test Remedial Interventions to Relieve PM Stress Points

It is not anticipated that any remedial interventions would be needed on the SRN to accommodate the PM Local Plan scenarios.

It is likely that interventions could be required on the local road network within Crawley, to mitigate PM impacts. However, the PM model ‘sensitivity’ assignments are from a ‘worst case’ highway-only model, without applying any ‘variable demand mechanisms’ (VDM). These VDM were used in the AM appraisal and are important, because they represent the way in which increases in road congestion and travel cost cause people to choose alternative travel modes, destinations, or routes, thereby relieving highway ‘stress’ points. Since the VDM could not be used in this ‘worst case’ PM appraisal, any indication that PM remedial schemes are required, may not be reliable. This assessment is not a sound basis for developing remedial schemes within Crawley. Further, more detailed PM modelling would be needed to draw reliable conclusions.

Conclusion – This PM ‘worst case’ model does give a robust indication of the need for Local Plan PM mitigation on the SRN (M23 / A23). None is required.

7. Check outline remedial scheme at M23J9 against basic design and safety standards

A broad, outline assessment has been made of the proposed remedial scheme at M23J9, by a qualified road safety engineer, to confirm if the layout is likely to comply with design and safety standards, as indicated by DfT Design Manual for Roads and Bridges (DMRB). The main issues arising are as follows:

- The proposed signal layout appears generally feasible; it must comply with DMRB TD 50/04 - The Geometric Layout of Signal Controlled Junctions and Signalised roundabouts.
- Re-grading of the south west embankment will be required to add entry width to the nearside of the M23 n/b exit slip, for carriageway widening.
- Land ownership issues could be a constraint on the slip road widening, but have not been fully investigated at this outline stage.
- Swept paths for large vehicles seem to be achievable; full swept path analysis will be required.
- The proposed slip road and roundabout circulating layout appear to be feasible; the M23 n/b exit left slip must comply with TD51/03 - Segregated Left turn Lanes and Subsidiary Deflection Islands at Roundabouts.
- The proposed 3-lane exit to M23 westbound from J9 must be narrowed to 2 lanes prior to Peeks Brook Lane Bridge, to prevent the need for widening the bridge structure; this may require a speed restriction on the M23J9 exit to M23W.

Conclusion – Within the limitations of a very preliminary outline remedial scheme design, the proposed layout at M23J9 is considered to be feasible, with the qualification that further detailed survey, design and safety audit procedures must be undertaken in due course.

8. Check M23 motorway slip roads against layout standards for forecast flows

An assessment has been made of the layout standard that would be required at the M23 entry merge and the M23 exit diverge slip roads, at junctions, 9, 10, 10a and 11, under the traffic demands predicted for the various LP scenarios. This assessment refers to DMRB design standard TD22/06 ‘Layout of Grade Separated Junctions’. Layout standard has been judged on the basis of link demand flows extracted from the AM and PM 2029 highway models. The 9% uplift to all flows at and through M23J9 has again been applied, to compensate for poor base model validation.

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It is difficult to form recommendations regarding M23 mainline and slip road layouts, between J9 and J11, wholly on the configurations given in DMRB, because some of the existing provision differs from, or falls short of standards. In particular:

- All M23 slip roads are 2-lane connectors with simple, single-lane merge and diverge arrangements, except for provision of 2-lane ghost island merges at the n/b entries from M23J10 and M23J10A.
- The entire mainline M23 is a dual 3-lane motorway, although fewer lanes would be needed to accommodate some of the non-peak directional flows.

All of the identified needs for M23 layout improvements would apply to all LP scenarios (Reference, Preferred and Alternative). Therefore, no remedial intervention is proposed as part of the Crawley LPTS.

A summary of the M23 layout mitigation that would be needed *in all scenarios* at 2029, is given below:

- Mainline lane widening from 3 to 4 lanes, n/b AM, between M23J10 and M23J9.
- Exit slip widening from 1 to 2 lanes, with mainline lane drop, n/b AM at M23J9.
- Entry slip widening from 1 to 2 lanes, with ghost island / parallel mainline lane gain, s/b PM at M23J9.
- Mainline lane widening from 3 to 4 lanes, s/b PM, between M23J9 and M23J10.
- Exit slip widening from 1 to 2 lanes, with ghost island / parallel mainline lane drop, s/b AM at M23J10.
- Entry slip widening from 1 to 2 lanes, with ghost island / parallel mainline lane gain, s/b PM at M23J10.
- Mainline lane widening from 3 to 4 lanes, s/b PM, between M23J10 and M23J10A.
- Exit slip widening from 1 to 2 lanes, with ghost island / parallel mainline lane drop, n/b AM at M23J11.
- Entry slip widening from 1 to 2 lanes, with ghost island / parallel mainline lane gain, n/b AM at M23J11.
- Exit slip widening from 1 to 2 lanes, with ghost island / parallel mainline lane drop, s/b PM at M23J11.

Conclusion – the Crawley hybrid AM and PM modelling gives a robust assessment of the need for remedial improvements to the M23 and slip road layouts. None are required under the LP strategies that would not already be needed in the reference case, at 2029.

9. Prepare outline cost estimate for remedial scheme at M23J9.

A broad cost estimate has been made for the proposed remedial scheme at M23J9. It is anticipated that the localised widening on the M23 n/b exit slip approach to the signals, the circulating carriageway and the exit to M23 westbound, would cost in the order of £0.75m. If it was considered desirable to extend the widened 3-lane carriageway on the M23 westbound, leaving the junction past Peeks Brook Lane bridge, this could cost in the order of a further £2.0m.

We realise, Elizabeth, that you'll receive this note with only a short time to spare before the deadline for submitting written statements to the Crawley LP Examination. The delay is because the PM sensitivity testing with the Crawley transport model has been quite onerous. However, if you could review and respond at your earliest convenience, CBC would be most grateful. We trust that we've answered all of the HA concerns, but if you've any queries or issues regarding the note, please contact me at the address below. Many thanks.

Regards

Tim Lynn

Timothy Lynn

Principal Transport Planner | Transport Planning | Consulting, Rail & Strategic Highways
Amey

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CBC/013 Matter 6 Infrastructure Provision, Implementation and Monitoring February 2015

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Amey, The Sherard Building, Edmund Halley Road, Oxford, OX4 4DQ

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Brigden, Elizabeth

From: Cleaver, Elizabeth <Elizabeth.Cleaver@highways.gsi.gov.uk>
Sent: 19 January 2015 09:46
To: Brigden, Elizabeth
Cc: 'Guy Perfect'
Subject: FW: Crawley Local Plan - transport modelling

Dear Elizabeth

I have received the following comments from our consultants -

We are generally content with the approach subject to a few points. I refer to Tim Lynn's email in the chain below when referencing the point numbers

2. The validation information is required to ensure that the AM model is representative of the network flow. If for example any of the link flows (modelled versus assigned) are significantly different, what confidence can we have in the modelling outcomes? Therefore, if there are sizeable differences in the validation flows some further discussion may be required on the way forward. We would also like some further details of the matrix estimation process particularly to which parts of the matrix it was applied (observed/unobserved or both).

3. Refers to 2029 NTEM factoring to match PM counted flows (presumably 2029?). This needs clarification as it does not make sense.

3. Note our comments earlier in December to CBC and WSCC and in the Local Plan representation about the housing numbers. We need confirmation that the "with development" and "without development" housing totals are accurate in the transport strategy. Note also our comments that the housing totals in the Local Plan fall below the objectively assessed need for the Borough. The HA will only be able to support the plan based upon the housing numbers assessed and not the objectively assessed need.

4. Sense checking is sensible although we would expect good justification of any changes to trip totals. A balanced approach, looking both at reducing certain purpose trips and increasing other purpose trips seems an appropriate method for example.

5. High and low growth scenarios are not essential for the HA, a core scenario will suffice for the Local Plan as per the AM peak hour.

3 and 5. In terms of the growth, the wording is different from the 2014 transport strategy report (Paras 4.2.3 and 4.2.4), so consistency of approach is required.

9 and 10. Presumably this will require the use of more detailed junction models as per the AM peak assessment. If so we are happy with the approach.

I hope this is helpful. Kind regards,

Elizabeth Cleaver, Assistant Asset Manager
Highways Agency | Federated House | London Road | Dorking | RH4 1SZ
Tel: +44 (0) 1306 878605
Web: <http://www.highways.gov.uk>
GTN: 3904 8605

Issue: Whether the CBLP is sufficiently proactive and effective to ensure timely delivery of its proposals and the necessary infrastructure.

Safe roads, reliable journeys, informed travellers
Highways Agency, an executive agency of the Department for Transport.

From: Brigden, Elizabeth [<mailto:Elizabeth.Brigden@ Crawley.gov.uk>]
Sent: 09 January 2015 16:49
To: Cleaver, Elizabeth; 'Guy Parfect'
Cc: Phillips, Peter; 'Chris Owen'; Cordery, Rachel
Subject: FW: Crawley Local Plan - transport modelling

Dear Elizabeth/Peter/Guy,

Please find below a proposal prepared by Amey Consulting for additional transport modelling to support the existing Transport Modelling Studies undertaken during the preparation of the Crawley 2030 Local Plan:

[LP119 Transport Modelling](#) (2012) Amey Consulting Stage 1

[LP120 Transport Modelling](#) (2014) Amey Consulting Stage 2

I would welcome your thoughts on the proposal set out below and whether you consider it will address the concerns raised by the Highways Agency during the statutory submission Consultation stage (September – October 2014) of the Local Plan and discussed subsequently with my colleague Rachel Cordery and the County Council Officers, Guy Parfect and Chris Owen.

Please note the timetable for this piece of work is extremely tight: while we have not heard officially yet the dates for the Local Plan's examination hearing sessions, it is anticipated this will be held during March 2015. To be of assistance for the Inspector, it would be essential that the final report is prepared as far in advance of the hearing sessions as possible. Therefore, I will be hoping to commission the work next week and would welcome your feedback to inform my directions.

I look forward to hearing from you in due course. Please let me know if you have any concerns or difficulties with the restricted time constraints, or if you require any additional information which I can help you with.

Kind Regards
Elizabeth

Elizabeth Brigden
Planning Policy Manager
Forward Planning
Development & Resources
Crawley Borough Council
01293 438624

From: Lynn, Timothy [<mailto:Timothy.Lynn@amey.co.uk>]
Sent: 09 January 2015 16:19
To: Brigden, Elizabeth
Cc: Cordery, Rachel; Garside, Wayne
Subject: RE: Crawley Local Plan - transport modelling

Elizabeth

I've just got on to revising the task and cost proposal for further work on the Crawley LPTS, following our conversation on Tuesday. I've now tried to take account of comments from Guy Parfect and Chris Owen at WSCC, with regard to:

- A contingency cost for checking the broad outline design of proposed remedial schemes, to confirm that they'll meet basic design and safety standards from DMRB – I've allowed for a maximum of 10 schemes, to cover AM and PM issues, but we would only charge for the actual number of schemes that are ultimately required – there are currently five AM remedial schemes (new task 11);

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- Engagement with the Highways Agency, to agree additional tasks, and appraisal outcomes (new task 14);
- Broad outline estimate of capital / land costs for proposed remedial schemes, for AM and PM (new task 13); and
- Retaining three Local Plan scenarios throughout the assessment, i.e. reference case, preferred strategy and alternative strategy.

So, in summary, the new breakdown of proposed tasks and costs is as set out below, with some explanatory notes for what each task entails:

1. Review, discuss & agree S-2 PM modelling & appraisal tasks with CBC & WSCC.
This is the inception and scope-setting exercise.
2. Review Crawley hybrid AM base model accuracy & validation at M23 J9-11, for compliance with WebTAG. This is to check how well the Crawley hybrid SATURN / CUBE base AM 2008 model matched counted traffic flows and provided sensible trip matrix origin-destination movements. If the validation was reasonable, it gives reassurance that the PM model should also be reasonable. It must, however, be noted that the PM model will have weaknesses, because, for example, it will contain transposed AM education trips that probably should not be contained in the PM peak.
3. Transpose Crawley hybrid AM 2029 model to PM equivalent for x3 scenarios (Ref Case, Pref Strat, Alt Strat); factor to NTEM PM traffic level for Crawley Borough.
This is the technical task of reversing the AM model trip patterns to represent the PM equivalent, but factoring the resulting PM model trip volumes to match the counted PM traffic flows.
4. Sense-check PM matrix trip patterns for key development sites (x3 scenarios) & adjust as necessary. As the AM 2029 model includes future year land use changes (in line with ref case, pref strat, alt strat, etc.), we will also check if the reversed PM land-use trips are also sensible for given journey purposes (although there are bound to be some inaccuracies in the PM).
5. Assemble core / low / high PM sensitivity trip matrix scenarios (to be agreed) i.e. x9 PM scenarios. This assumes that three matrix sensitivity scenarios will be assessed in the PM model, for each of three Local Plan strategies, as follows:
 - Core scenario – with straight transposition of AM matrix (from 1-3 above);
 - Low scenario – with NTEM low growth adjustment (from WebTAG unit M4 section 4) applied only to districts outside Crawley and Horsham (as all NTEM growth is made up of site-specific trips in Crawley and Horsham); and
 - High scenario – with NTEM high growth adjustment (from WebTAG unit M4 section 4) applied only to districts outside Crawley and Horsham (as all NTEM growth is made up of site-specific trips in Crawley and Horsham).
6. Run PM core, low & high sensitivity assignments for x3 scenarios: (ref case, Pref + mitigation, Alt + mitigation) = x9 PM assignments.
This covers the mechanics of running the model assignments.
7. Sense-check, analyse & extract key model outputs for x9 PM scenarios.
This is a key task, making sure that the modelled outcomes are sensible and undertaking appropriate analysis to assess the PM Local Plan impacts.
8. Check PM performance for: M23 J9-11; A23 jcts; for x9 PM assignments.
This is a specific requirement from HA to assess the PM performance of the M23 and A23 junctions in the study area, under the various scenarios.
9. Check PM performance for: Pref strat & Alt strat AM mitigation jcts; for x9 PM assignments.
This is to see if the five proposed remedial schemes that were identified from the AM Local Plan study are needed and fit for purpose in the PM.

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10. Devise and test additional PM mitigation schemes, as necessary.
This is to propose suitable remedial schemes for any network locations that require impact mitigation in the PM, but which performed satisfactorily in the AM.
11. Contingency to check proposed layout for M23J9 & x10 (max) outline remedial schemes to basic DMRB design / safety standards.
This is a 'ceiling' task to review and if necessary amend the proposed scope of remedial interventions, from the AM and PM appraisals, such that the outline mitigation schemes are better aligned with DMRB design and safety criteria.
12. Assess performance of M23 J9-11 merge / diverge slips against DMRB standards for x9 PM assignments.
This is an HA requirement to use DMRB TD22/06 'Layout of Grade Separated Junctions', to assess if the slip road arrangements at the M23 junctions will handle the predicted Local Plan traffic patterns.
13. Develop cost estimates for all remedial Local Plan mitigation schemes.
This is to provide indicative capital and land costs for implementing the proposed remedial AM and PM schemes.
14. Engage with Highways Agency to discuss concerns and achieve consensus on study tasks & outcomes.
This is to try to streamline the process of reassuring the HA about the likely impacts of the Crawley LPTS, by regular communication and sharing information.
15. Assemble & submit technical note on S-2 PM model sensitivity tests.
This is to report on the findings from the PM LPTS.
16. Project management: programme, resource & budget; communication with client; quality assurance, etc.
This is to ensure effective delivery of the required tasks and outcomes.

The revised total cost for the proposed tasks would be This includes the maximum contingency for refining outline remedial scheme designs to align broadly with DMRB design and safety standards.

I think we could still complete the above tasks within about five weeks from commissioning. This means that we'd aim to submit the pre-discussed study findings, in a technical note, to CBC and HA by the 3rd week in February, say 20th at the latest.

I don't think we need an initial meeting. However, a tele-conference with Crawley BC, Highways Agency and West Sussex CC may be worthwhile, to finalise the detail of the proposed study method.

I think we could proceed on the basis of your stated invoice No. C2021 31502 EB, without a PO, as this would be an extension to an existing commission.

We'd be happy to receive payment upon satisfactory completion of the project.

Sorry it's taken some time to send you this revised proposal, Elizabeth – things are very busy at present. Please get in touch if there are matters that you'd like to discuss, or if you're happy for us to proceed.

Thanks and Regards

Tim

Timothy Lynn

Principal Transport Planner | Transport Planning | Consulting, Rail & Strategic Highways
Amey

Issue: Whether the CBLP is sufficiently proactive and effective to ensure timely delivery of its proposals and the necessary infrastructure.

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