

Local Highway Panels Members' Guide

Appendix 1 Costs and Timescales



Introduction

Essex County Council have entered into a long term partnership with Ringway Jacobs to deliver efficiencies and meet the financial challenges over the coming years. The contract that was agreed is based on target costs rather than fixed prices.

This type of contract means that it is not possible to provide a fixed cost for a scheme based on a schedule of rates. Every effort will be made to accurately estimate the costs at inception stage so that the panel has a level of confidence in its budget allocation. When a job is completely designed, a target cost will be set to firm up the cost of the work. Whilst our contractual mechanism is set up such that we can charge the actual cost of the work, we are not entitled to charge more than 105% of the original target cost. There will also be instances when the actual cost of work is lower than the original target and this will result in a saving against these jobs.

Additional risks associated with any project may only become apparent as the scheme progresses and if they materialise and are approved then these additional costs will need to be incorporated into the overall final invoice.

If additional unforeseen issues arise then these will be raised with the panel for their decision:

- Increase of no more than 20% up to a maximum of £10,000, automatic approval.
- Increases greater than 20% or over £10,000, panel to confirm one of the following:
 - Increase the budget and continue with the project.
 - Review options and manage the project within the budget.
 - Cease the project.

At the feasibility stage the scheme costs will be an initial indicative cost based on the engineer's general experience in delivering similar schemes.

The financial information provided to the Panel for initial scheme prioritisation will include an initial amount of risk that may need to be accommodated.

Risk, refers to anything that may occur that will increase the cost of the scheme. This could include a wide range of items; typical examples are:

- The presence of Statutory Undertakers' apparatus (electricity, gas water etc.) within the scheme area.
- The need to replace street lighting.
- Weather related delays and cost increases due to ground conditions.
- The need to resurface the carriageway/footway in order to deliver the scheme.
- The cost of additional design time if the scheme receives objections and the design has to be amended
- The need to accommodate environmental issues such as relocation of protected species etc.

If risk does not materialise then those cost will not be charged. If the risk does materialise then the final cost will include that element.

During the detailed design stage many of these risks will be identified and the costs at that stage will be provided with a much greater level of confidence. Despite that the costs may change due to unforeseen circumstances such as the presence of unknown statutory undertakers' apparatus.

Generally most simple schemes can be designed, consulted on and installed within one fiscal year, however, timescales will depend on a large number of factors.

Factors can include, but are not limited to, the following:

- Land acquisition - if land is needed for the scheme, it cannot be programmed for delivery by the LHP until that has been concluded.
- Time of year for implementation - weather can delay the implementation of projects.
- The availability of a permit to work at that location - if other works are planned and conflict then this may result in a delay in programming the work to commence.
- Traffic Management - this is needed to enable the work to be carried out safely.

Scheme Delivery

Scheme delivery is split into five activities. These are described in the table below.

Activity	Description
Feasibility design	This describes the initial work to investigate engineering options to treat the problem and identify the potential risks to delivery. The feasibility options and initial costs will be passed to the LHP for approval before the project moves into the detailed design phase.
	At the end of this stage, the LHP will be provided with an initial indicative cost for this type of scheme. There will be an explanation of the potential risks to the cost due to design issues.
Detailed design	At this stage the scheme will be designed in detail including all the necessary searches for utility apparatus, environmental approvals and specialist engineering information.
	At the end of this stage, the cost of the scheme will have a greater degree of confidence but will still not be a confirmed price.
Procurement	Once designed the scheme will be offered to RJ's in-house delivery team and/or the supply chain partners (depending on the nature of the scheme) for target costing.
	At this stage there will be a much higher degree of confidence in the final cost but it may still be subject to change due to market conditions. This will be managed by the RJ Commercial Team through the contractual change process.
Mobilisation	This is the time required to get the various permits and traffic management approvals and for the contractor to order any equipment needed.
	The period is usually set at 12 weeks but this may be shorter or longer depending on the complexity of the project and availability of equipment and any difficulty in agreeing permits to work etc.

Scheme Delivery continued...

Activity	Description
Works	This is the period of time the works are likely to take. This will be affected by a number of factors including, but not limited to:
Implementation	<ul style="list-style-type: none"> • The priority of the road and its location • Traffic volumes • Whether a full road closure is needed • If the work can be undertaken using traffic signals • Whether the work will be limited to off-peak working only • Whether weekend or night time working will be approved.
	Once started the works can take longer than estimated due to unforeseen factors such as weather and ground conditions or unexpected utility apparatus within the works area.

Timescales

To deliver an efficient service for Essex County Council the staff resources available to the LHPs will be working on a number of schemes simultaneously. The indicative timescales are not the total hours an individual will work on the scheme but shows the time period over which a number of activities will be undertaken in order to deliver the feasibility study, detailed design and works delivery. These activities may include:

- **Site visits**
- **Traffic, pedestrian, speed surveys**
- **Searches from the utility companies for apparatus within the works area**
- **Road Safety Audits**
- **Permit booking**
- **Organising consultations**
- **Cabinet Member Briefings**
- **Cabinet member Approvals for scheme progression**
- **Procurement process.**

Not all schemes will be started at the beginning of the financial year. The LHP schemes are managed by the Team Leaders in each area. The work will be undertaken by the Design Teams and will be programmed over the financial year. Due to the volume of work, the design and implementation of schemes will be staggered throughout the year. Longer, more complex schemes will be programmed to start as soon as possible, minor schemes may start later in the programme. The aim is to have all schemes that are being delivered within a financial year to be designed by the end of October. This provides sufficient time to programme their delivery before the end of March.

Progress will be reported to the LHPs at the quarterly meetings.

1 - Road Safety Schemes

Costs can vary enormously from site to site depending on the identified cause of the collision and the proposed remedial measure.

Road Safety Schemes are designed and prioritised on the basis of the cost of the scheme, set against the government value of the cost of the injuries that are predicted to be prevented at the site in the first year after the scheme has been implemented; this is known as the First Year Rate of Return (FYRR)

Road Safety Schemes can take many forms depending on the causation factor or factors that have been identified. The resultant schemes will be a mixture of initiatives from across several sections within the Guide such as speed, crossings, traffic signals, cycling schemes etc. The individual sections within the Members' Guide provide indicative costs for the remedial measures that are proposed.

2 - Speed and Traffic Management

The safety of our operatives is paramount in all work undertaken. Traffic Management requirements during the works will depend on the type of work being undertaken, the status of the road, its width and the traffic volumes. If the carriageway is not sufficiently wide enough to allow the work to be carried out safely either using stop go boards or temporary lights, the works will require a full road closure. The increased traffic management will be reflected in the cost of the works. This will be identified at the detailed design stage.

The following information is provided to give you an idea of indicative costs and timescales for different types of schemes.

Changes to Speed Limits

Scheme	Indicative Cost
Change of single speed limit which is uncontentious and where minimal infrastructure is required.	£15,000
Change of speed limit where four new street lighting columns are required to illuminate a new 30 mph speed limit.	£35,000
2 village Gateways including carriageway treatment.	£17,500
Build outs.	£5,000
Additional costs may be identified as the project is developed and risks identified.	

Key Risks

It is very difficult to be precise about costs for speed limit changes as there are a wide range of variables.

2 - Speed and Traffic Management continued

- Changes to speed limits is a legislative process that requires formal consultation. The consultation process can be both lengthy and costly and can result in additional costs if the outcome requires design changes.
- Ideally these schemes should be programmed over two years with the design in year one and works in year two.
- The works required to support speed limit changes also vary depending on the number of signs required and whether street lighting has to be installed. If street lighting is required, checks will need to be made to ensure that there is an electricity power supply that can be used. The volume of work may also vary depending on whether the scheme will incorporate village gateway treatment or other changes to support the reduction in speed.

Timescales

Changes to speed limits can take up to a year to complete due to the risk of objections.

20mph Zones

Scheme	Indicative Cost
20mph zone including 5 entry points and 20 speed cushions.	£125,000
Additional costs may be identified as the project is developed and risks identified.	

Key Risks

- Local objections can result in considerable additional design costs to accommodate local objections.
- The actual design of the scheme and the number of entry points will impact on the number of signs required.
- The amount and style of traffic calming that is agreed will affect the costs.
- Utility apparatus may affect the possible locations of speed cushions and build-outs and could add significantly to the overall costs.
- If the street lighting requires upgrading then there will be significant additional costs.

Timescales

New 20 mph zones can be controversial due to local concerns regarding the positioning of traffic calming features. This will result in additional design work as well as time necessary to get Cabinet Approval for the scheme prior to starting the legal process to introduce the zone.

20mph zones can take 12 to 18 months to implement and should be programmed over two years.

Roundabouts

Scheme	Indicative Cost
3 arm Mini Roundabout within the existing highway, including carriageway realignment but excluding changes to speed limit or lighting.	£30,000
3 arm Mini Roundabout within the existing highway, including carriageway realignment and additional/improvements to street lighting. Excluding changes to speed limits.	£60,000
3 arm Mini Roundabout within the existing highway, excluding carriageway realignment, changes to speed limit or lighting.	£5,000
Additional costs may be identified as the project is developed and risks identified.	

Key Risks

- If the mini roundabout cannot be installed without additional highway land being acquired then the scheme cannot proceed until the land acquisition has been completed.
- If the mini roundabout cannot be installed within the existing carriageway then there will be additional costs to realign and re-profile the road. This may also impact on the footway provision at that location.
- The street lighting may need to be improved or new lighting installed.
- If there is an impact on any utility apparatus then significant additional cost may be incurred to divert the apparatus.
- Additional speed management may be required to ensure the average approach speed is below 35 mph to reduce the risk of introducing collisions.
- If the drainage system at the location needs to be amended then there will be additional costs.
- The location of the mini roundabout may impact on residents' crossovers. This may result in significant objections being received about the scheme requiring further design changes.

Timescales

- If the design can be accommodated within the existing highway, does not impact on any utility apparatus and does not receive objections then it can be designed and delivered within one financial year. If the design is more complex and/or is controversial then it should be programmed over two financial years.

2 - Speed and Traffic Management continued

Vehicle Activated Signs

Scheme	Indicative Cost
Vehicle Activated Sign. Solar Powered, design and installation.	£8,500
Vehicle Activated Sign. Mains powered supply available, design and installation.	£10,000
Additional costs may be identified as the project is developed and risks identified.	

Key Risks

- Utility apparatus under the carriageway or footway that is expensive to relocate.
- Difficulty in identifying a suitable location for the VAS.
- Traffic Management required in order to install VAS equipment.
- There may be local objections to scheme.

Timescales

In most circumstances the scheme can be designed, programmed and delivered within one financial year.

3 - New Pedestrian Footways

Costs and timescales can vary enormously from site to site.

Scheme - design and implementation	Indicative Cost
200m of footway width, 1.2m including kerbs, up to 10 vehicle crossovers within the existing highway land including alteration to drainage. Not including, lighting, diversion of utility apparatus etc.	£90,000
Additional costs may be identified as the project is developed and risks identified.	

Key Risks

- If the existing verge is not of sufficient width to accommodate a footway of minimum width 1.2m then land may be required.
 - The cost of land cannot be estimated as there are many factors that affect its value. The scheme cannot proceed until the land has been acquired.
- New lighting may be required or columns relocated to provide sufficient footway width.
- Any alterations/diversion of utility companies' equipment can add significantly to any project. If communications cables need to be relocated then costs can be over £1m.

- It is not unusual to get objections to new footways. Any objections received during a consultation period will also significantly affect delivery timescales. This may also increase costs due especially if the scheme needs to be redesigned to accommodate objections.

Timescales

Timescales will depend on the complexity of the project and the length of the new footway.

No scheme can be programmed until any additional highway land has been acquired.

Very short lengths of additional footway within the existing highway boundary can be designed and delivered within one financial year.

Longer, more complex schemes should be programmed over two financial years with the design in year one and delivery in year two.

4 - Signs and Road Markings

Scheme - design and implementation	Indicative Cost
Signage per sign/post.	£500
Vehicle Activated Sign. Mains powered supply available, design and installation.	£8,500
Additional costs may be identified as the project is developed and risks identified.	

Key Risks

Working within the carriageway will require some form of traffic management. On busier principal roads, work needs to be carried out outside peak periods and the traffic management may be more complex or may require work to be undertaken at night or at weekends. Additional traffic management will incur additional costs.

Timescales

Simple lining schemes will be designed and delivered within one financial year.

There may be time delays due to the need to book road space and agree any local working arrangements in order to obtain a permit. Depending on the location and the amount of work, there may be restrictions on working times as well as the need to have Traffic Management as part of the work.

It should be noted that wherever possible the work will be programmed with other similar activities in the area to reduce the overall cost of implementation. This will mean that the delivery time is adjusted to fit in with the overall annual programme.

5 - Crossings

Scheme	Indicative Cost
Pair of dropped crossings with tactile paving.	£4,000
Pedestrian refuge/island.	£10,000
Zebra crossing, no additional lighting or road surfacing required.	£35,000
Zebra crossing, including street lighting upgrade and resurfacing.	£65,000
Additional costs may be identified as the project is developed and risks identified.	

Key Risks

- If there is utility apparatus within the highway then the cost of diverting this may become prohibitively expensive.
- If additional or upgraded street lighting is required then this will add to the overall cost.
- The location of a pedestrian refuge may impact on local residents and they may raise objections. If this happens there may be additional costs resolving their concerns and/or amending designs.

Timescales

As long as there are no objections to the scheme or utility apparatus to be diverted then the scheme should be delivered within one financial year.

6 - Traffic Signals

Costs

The design of new traffic signals and light-controlled crossings are covered by specific design guidance that must be followed. The technical design of the signals equipment is undertaken by specialist staff, however, the design and implementation of the associated works will differ depending on the location. It can include specialist road surfacing and new lighting to ensure that the new lights or crossings are not likely to result in additional collisions.

Scheme	Indicative Cost
Traffic Signals at a junction, no additional changes to highway infrastructure.	£200,000
Stand-alone Pedestrian/Cycle Crossing – Single carriageway, no utility apparatus to be removed, no additional highway infrastructure or resurfacing required.	£140,000

Scheme	Indicative Cost
Stand-alone Pedestrian/Cycle Crossing – Single carriageway, no utility apparatus to be removed. Additional lighting and road surfacing.	£180,500
Standalone Pedestrian/Cycle Crossing – Dual carriageway, no utility apparatus to be removed, no additional highway infrastructure or resurfacing required.	£160,000
Standalone Pedestrian/Cycle Crossing – Dual carriageway, no utility apparatus to be removed. Additional lighting and road surfacing.	£250,000
Additional costs may be identified as the project is developed and risks identified.	

Key Risks

The most significant risk to the implementation of new traffic signals and signalised crossings is the likelihood of utility apparatus within the carriageway. Time delays may occur whilst waiting to acquire the information from the Utility Companies and in some cases expensive relocation of services may need to take place in order to site the signal poles in the correct locations.

Other additional costs may include the need for improved street lighting and specialist surfacing works and kerb realignments, as well as, in some instances, the provision of additional footways to link up with a new signalised crossing location.

The Traffic Management Costs will also have an impact as the works may require a full road closure in order to carry out the work safely. In some instances night time working is required to minimise the peak time disruption on the network; this again adds additional costs.

Adverse weather conditions can result in delays and increased costs.

Timescales

These are complex schemes and should be programmed over two financial years with the design in year one and the implementation early in year two.

7 - Cycling Schemes

Scheme	Indicative Cost
200m Shared, segregated or unsegregated footway/cycleway within existing footway, including drainage but not including lighting.	£225,000
200m Shared, segregated or unsegregated footway/cycleway within existing footway including design, new lighting and drainage.	£275,000
Additional costs may be identified as the project is developed and risks identified.	

7 - Cycling Schemes continued...

Key Risks

- Land is required.
- The existing footway requires extensive improvements.
- The existing footway requires widening to accommodate the shared provision.
- Alterations need to be made to the existing drainage system.
- Additional street lighting or changes to the street lighting is required.
- The existing lamp columns need to be repositioned.
- If a Toucan crossing is required to link two sections of cycleway.
- Cycle crossing locations are required along the route.

If land is required the scheme cannot commence until the land agreements have been finalised.

If the footway has to be widened and the carriageway narrowed to enable the scheme to be delivered then there will be additional design costs and more time required for utilities enquiries. There will also be additional costs incurred for carriageway/ cycleway construction and changes to the drainage system.

Timescales

If the scheme can be designed within the existing footway and there are no unexpected difficulties then the scheme can be delivered within one financial year.

If the footway needs to be widened and the carriageway narrowed to provide the new cycleway then this may need to be programmed over two financial years.

Scheme	Indicative Cost
2200m Cycle lane within existing carriageway.	£20,000
Additional costs may be identified as the project is developed and risks identified.	

Key Risks

- The existing carriageway and footway may need to be realigned to accommodate the new cycle lane.
- Impacts on any local utility apparatus.
- Coloured surfacing is required to highlight the cycle provision.
- Street lighting needs to be included or upgraded.
- Alterations required to the existing drainage system.

Timescales

If the scheme can be implemented within the existing highway, then it can be designed and delivered within one financial year.

If the scheme requires any changes to the carriageway alignment then this may take considerably longer and may need to be programmed over 2 years.

Cycle Parking

Costs

Scheme	Indicative Cost
10 Sheffield Stands design and installation.	£3,500
Covered cycle shelter for 10 cycles.	£7,500
Additional costs may be identified as the project is developed and risks identified.	

The costs for cycle parking provision vary on the type of provision and the number of cycles to be accommodated. They may also require permission from a land owner for the installation and in exceptional cases may require planning permission.

Key Risks

- **Land** - The most significant risk associated with the installation of cycle storage is land ownership and having sufficient highway land to install the cycle storage in a suitable location.
- **Utility Equipment** - There is a high probability of utility equipment within the new cycle parking location. This will need to be checked before a scheme can be finalised. The presence of utility apparatus may restrict where the storage can be located.

Timescales

Timescales vary depending on land availability. If the land is highway land and the location is uncontroversial then the design, site investigation, and ordering and installation of the cycle racks can be completed within 26 weeks. This timescale assumes there are no additional delays due to weather or agreeing the permit and dates to undertake the work.

8 - Passenger Transport

Costs

Scheme	Indicative Cost
Bus Stop Pole and Flag.	£1,000
2-bay metal framed passenger shelter – unlit.	£6,000
2-bay metal framed passenger shelter – including mains lighting.	£10,000
2-bay metal framed passenger shelter – including solar lighting.	£8,500
Raised access kerbs – per stop.	£5,000
Additional pair of Dropped kerbs.	£4,000
Real-time information sign including installation.	£12,000
Additional costs may be identified as the project is developed and risks identified.	

8 - Passenger Transport continued...

Key Risks

- Consultation is undertaken on new stop locations wherever there is likely to be an effect on local residents. This can result in time delays and cost increases if the design has to be amended.
- If utility apparatus requires moving, this will increase costs.
- The length of trenching required.
- Impact of raised kerbs on drainage in the area.

Timescales

If there are no unforeseen factors then the scheme should be designed and delivered within 26 weeks. The scheme may not be programmed for design until the 2nd quarter of the financial year.

The installation of bus shelters is often undertaken by the supplier. Their availability to install the shelters may impact on delivery timescales.

9 - Public Rights of Way

Costs

Scheme	Indicative Cost
Urban blacktop.	£20/m ²
Rural planings including granite dust.	£15/m ²
Plank and rail over short brook.	£7,500
A medium (8-10m) footbridge in an area of easy access to both sides.	£80,000
A structure with piled foundations spanning a large byway/bridleway.	£250,000
Additional costs may be identified as the project is developed and risks identified.	

Key Risks

- For larger structures it is likely that land acquisition will be required.
- If utility apparatus or private feeds require moving this may result in significant additional costs.
- Works commonly need to be done with drier ground conditions, e.g. over summer months.
- Access to the land may be restricted during certain periods (i.e. across fields after harvest).
- Additional drainage may be required which will add significantly to the cost of a scheme.
- The size of a bridge or other structure and its loading requirements may add significantly to the costs.

- Planning permission may be required for some structures.
- Environmental considerations and permissions may impact on the work. This can include the relocation of protected species or only working at certain times of year, both of which will impact on costs.

Timescales

It is not possible to give accurate timescales for work on the Public Rights of Way as these are often owned and maintained by individual land owners and negotiation with them, and sometimes with the environment agency, can have significant impacts on the time required.

Additionally the time available to undertake work can be extremely restricted due to weather and environmental factors.

Members will be provided with more accurate timescales once a project has been validated.

10 - Winter Issues

Costs

Scheme	Indicative Cost
Salt Bin - filled.	£500
Salt bags through the salt bag partnership	£0

Key Risks

- That the preferred location is not suitable for a salt bin.
- Should an existing ECC-owned bin (within the public highway) prove problematic because of regular misuse of salt for the treatment of private driveways, or vandalism, ECC reserves the right to remove it. If a salt bin has to be removed the cost is not refundable.

Timescales

The maintenance team install and manage the salt bins. The team have a forward programme of work and will install the bins as part of this programme. Bins ordered by the end of July will be installed for the forthcoming winter period. Bins ordered later in the year will be programmed as soon as possible. Those ordered during the main winter period cannot be installed immediately as the priority of the teams is to salt and maintain the network.

11 - Quiet Lanes

Costs

Scheme	Indicative Cost
A single road, including signing and lining and traffic regulation orders	£4,500
Six roads within an area	£16,000

Key Risks:

- The key risks will be the cost of design and consultation. If the area to be included is not easily defined then there may be a significant number of people wanting their area to be included. Increased design time and consultation can add significantly to the cost of the scheme.

Timescales

If there is broad agreement about the area to be treated, then a quiet lane scheme should be delivered within one financial year. If the area is not fully confirmed before the scheme commences then it should be programmed over two years, with the design in year one and implementation in year two.

12 - Parking restrictions

Costs

The most significant cost in the implementation of parking schemes is the resources needed to design and consult the scheme.

Scheme	Indicative Cost
Double Yellow Line junction protection (non-controversial).	£4,00
Residents' parking bays.	£10,000
New or extended single yellow line restrictions on single road.	£5,000
Parking Study within an area plus new/amended restrictions.	£30,000
Additional costs may be identified as the project is developed and risks identified.	

Key Risks

- Objections are the key risk to any new or amended waiting restrictions.
- If there are objections to the scheme then significant additional design time may be required to resolve the objections and agree an acceptable scheme.
- Concerns raised by residents living adjacent to the proposed new restrictions may result in the scheme being extended to include additional areas.
- New waiting restrictions may cause parking to migrate to other areas resulting in new requests for restrictions.

Timescales

The implementation of new or amended waiting restrictions can be an extensive process and traditionally take up to one year to complete.

Non-controversial schemes; such as Double Yellow Lines junction protection; the restrictions can be designed, consulted, prepare reports, go through the legal processes to make the TRO and then book the road space and implement the works within 26 weeks.

13 - Removing Highway Rights

Costs

Scheme	Indicative Cost
Stopping Up Order process including design time and consultation	£4,000 plus court costs.
Additional costs may be identified as the project is developed and risks identified.	

Key Risks

- The court charges are not a set fee so cannot be provided.
- If the court does not approve the order, the costs already spent cannot be recouped.
- If Utility apparatus required moving then, depending on the type of apparatus to be diverted, this can be prohibitively expensive and could cost well over £100,000.
- Where a wayleave or easement agreement is required to maintain the utility apparatus within the land when it is transferred to a new land owner then this cost must also be included.

Timescales

An extinguishment is a lengthy and potentially complicated legal procedure taking at least twelve months depending upon the nature and complexity of the application.

A technical appraisal has to be undertaken to determine whether the land is considered to be surplus to requirements and unnecessary for public use (either now or in the future).

The Highways Act 1980 requires that consultations are carried out with certain bodies including the adjoining owners and occupiers, Statutory Undertakers, the Borough/ City/District and the Parish Council.

Once all the consultations have been carried out and providing there are no objections, it is a statutory requirement that the proposal is then advertised, Notices are erected on site and a Magistrates Court hearing is arranged.

Once the problem has been clarified and a scheme validated your HLO will be able to advise you on the indicative costs and timescales.