LOCAL AUTHORITY MAJOR SCHEMES
APPLICATION FOR FULL APPROVAL

Scheme Name	A127 Essential Bridge and Highway Maintenance - Southend
Local Authority	Southend-on-Sea Borough Council

STRATEGIC CASE

Introduction

This proportionate business case has been developed using DfT's business case template for Local Authority Major schemes Application for Full Approval. This business case is considerate of the scheme costs and complexities and is for seeking £0.4m funding for years 15/16 initially and will be further developed for drawing down 2016/17 – 2020/21 years funding. The 2015/16 years funding will focus on further investigations and the Boundary to Progress Road scheme in which in this particular case it is clear that the frequency of localised cracking indicates that widespread structural failure has taken place although the detailed design of the scheme will be informed by GPR and FWD surveys. It is recommended that this funding is drawn down prior to completion of a full Value for Money appraisal for the remainder of the programme.

1.1 What is the Strategic Case for the scheme?

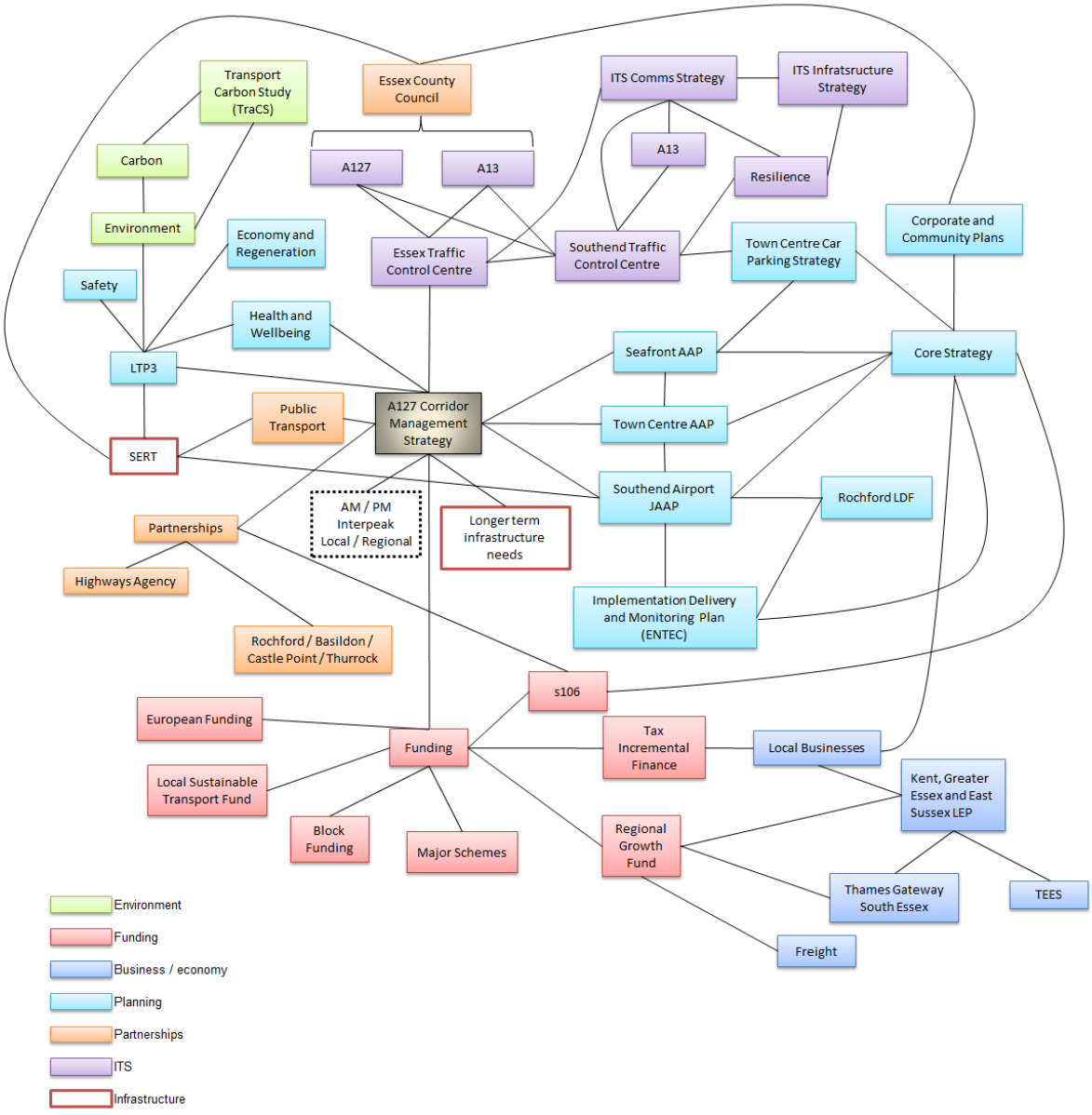
Introduction

The Council has a long standing strategic priority to address capacity issues, accessibility and journey time reliability along the A127 corridor. As identified in LTP3, the A127 is one of two routes into the Town Centre with the A127 being the strategic freight corridor into the town and principal access to London Southend Airport (LSA) and Rochford. The figure below provides a diagrammatic representation of the importance of the A127, not just to the movement of people and goods, but to wider planning, the environment, transport planning, business and the economy, partnership working, and intelligent transport systems. It is vital to the economy and well-being of Southend.

Successful improvements to the A127 route, in terms of journey time savings and reliability, have been carried out incrementally as funding has been applied for and granted. The "Better Southend" schemes at A127 Progress Road, A127 Cuckoo Corner and A127 / A13 Victoria Gateway and recently completed Pinch Point A127 / B1013 Tesco Junction Improvement were accepted for grant funding on the basis that they were required to support delivery of employment and housing, particularly at the Nestuda Way Business Park,

the London Southend Airport area, airport business parks, Town Centre and Shoeburyness. The Progress Road and Cuckoo Corner schemes delivered journey time savings of up to 15 minutes in the peak and significantly reduced queuing, and were a catalyst to Stobart's £120m investment in LSA.

Further improvements to the A127 are needed at Kent Elms and The Bell Junctions, as well as **significant maintenance works** to keep the route functioning as an integral part of the access improvements supporting the delivery of Business Park employment in areas adjacent to LSA, and new Rochford housing.



Policy context and compliance

South East LEP Strategic Economic Plan identifies the A127 as a key corridor for growth. As the vital strategic link between London, the M25, Basildon, Southend and Rochford that carries commuters, leisure traffic, and freight it is critical to the functioning of the economy of south Essex.

London Southend Airport and the new adjacent business park developments is a key employment area with a major focus on growth in the Thames Gateway South Essex area and is heavily reliant on the efficient functioning of the A127.

Plans for LSA involve releasing further land for business development (Saxon Business Park/Airport Business Parks), providing improved access to employment, supporting development in and around the airport, and within Southend itself. LSA and planned business parks, will prove attractive to a wide range of global companies and offers capacity for at least 4,200 additional jobs up to 2021 and a further 3,180 post 2021.

Southend and Rochford Councils have prepared an adopted London Southend Airport and Environs Joint Area Action Plan (JAAP) to unlock these opportunities. As a further boost to occupier interest, the airport business parks is one of the intended locations for a MedTech Campus. This is being proposed by Anglia Ruskin University in partnership with local government including SBC, central government, the NHS, private healthcare providers and the healthcare industry. The Southend Central Area (including Victoria Avenue) will be regenerated as a new quarter for offices and mixed use, including the City Deal secured Growth Hub. Comprehensive redevelopment plans for Basildon Town Centre are well advanced, including the relocation of South Essex College's Basildon Campus to the Town Centre.

Realising much of the growth depends upon resolving the key transport barrier to sustainable growth; addressing the significant reliability and resilience issues along the A127. At peak periods, the A127 carries traffic volumes which exceed those on many urban motorways elsewhere in the UK, resulting in a higher level of wear and tear than would normally be expected on a road of this type. Data shows the busiest sections of the route carried in excess of 70,000 vehicles (Average Annual Daily Flow) in 2011, which is in excess of the design capacity of a dual carriageway. With DfT's National Transport Model forecasting traffic can be expected to grow by over 40% by 2040, the adverse impact on Southend's economy could be significant if improvements are not made in the short, medium and long term. These high flows, and the forecast growth in traffic, are and will have an increasingly adverse impact on a route that is currently in need of maintenance if it is to continue in its role as the main road based transport artery for Southend.

Investment in this corridor is wholly compliant with the aspirations of the Economic Plan for Essex and the Economic Plan for Southend that will update and incorporate the Greater Essex Integrated County Strategy and the ECC Economic Growth Strategy. The package of improvement proposed supports the delivery of both the Southend and Essex Local Transport Plan, and has the support of partner authorities.

Furthermore, improving the A127 would support delivery of the growth aspirations of the South East Strategic Economic Plan, and contribute to the national economy as it emerges from the longest recession in living memory.

The improvement will support no only delivery of employment in the JAAP area, but more widely in Southend with over **16,000 new jobs** as shown by the following table:

Sector	Number of jobs
Production including manufacturing	788
Distribution, transport, accommodation and food	11,429
Financial and insurance activities	183
Public administration, education, health	183
Other services and household activities	4,108
Total	**16,690**

The GVA impact to Southend's economy is estimated to be **£4.51bn** over a 60 year period. Further details of the role of the A127 in delivering economic growth in Southend and Greater Essex can be found in *A127 – Corridor for Growth* which accompanies this submission.

The Scheme

The A127 is an aging corridor (originally opened in 1924), but one that is a vitally important primary route for the Thames Gateway South Essex (TGSE) area which connects the M25, Basildon and Southend (including London Southend Airport).

Both Essex County Council and Southend Borough Council have the stated ambition to make the County of Essex the location of choice for business and where innovation brings prosperity.

- To maintain and grow, the Essex economy depends on the efficient movement of people, goods and information, via effective and reliable transport and communications networks to provide access to markets and suppliers. It is therefore essential that we develop and maintain the infrastructure that enables our residents to travel and our businesses to grow; and
- Our support to employment and entrepreneurship across our economy is focused on ensuring a ready supply of development land, new housing and the coordinated provision of appropriate infrastructure.

The investment in this corridor is essential for the delivery of this ambition.

Further investigation / surveys are needed to priorities the level of maintenance work required on the A127 route. This application for initial funding will allow us to undertake surveys which will then lead to option generation later in the process.

Scheme objectives

The objectives for this scheme and their alignment with local and LEP objectives is confirmed by the table below:

National / Regional Objectives	Local Objectives	Scheme Objectives ✓✓✓ = high, ✓✓ = medium, ✓ = low
Releasing new investment Investing in our growth corridors	A thriving and sustainable local economy in the Borough	✓✓✓ The scheme will enable delivery of area actions plans throughout the Borough, particularly the JAAP

and growth sites Boosting our productivity		and development around the airport. It will ensure the A127 freight corridor, essential to the functioning of the economy, will remain open and not be subject to catastrophic failure leading to full closure for long periods of time or long periods for reactive repair maintenance.
	Minimise environmental impact, promote sustainability for a greener Borough	✓✓✓ Freer flowing traffic along the A127 will deliver positive environmental benefits. A well maintained A127 using suitable sustainable materials will ensure the environmental impact of maintenance is minimised. Improved lighting infrastructure will reduce energy consumption and light pollution. Improved drainage will reduce the risk of contamination to watercourses and water table.
	A safer Borough	✓✓✓ A well maintained A127, using up-to-date methods and materials, will reduce the potential for road traffic accidents for all users. Improved reliable lighting will improve the perceived level of safety.
Improving our skills	Reduce inequalities in health and wellbeing, and a more accessible Borough	✓ A well maintained A127 will ensures that the A127 route provides safe and efficient accessibility options for all road users. Also provides more reliable journey times providing assurance to major employers in the borough including Southned Airport and JAAP business parks.
Building more homes	A thriving and sustainable local economy in the Borough	✓✓✓ A well maintained A127 will ensure the economy of Southend can deliver employment growth, and that the demand for labour can be met by an increasing, appropriately qualified, labour force that can be accommodated in the Borough.

There are a number of both direct and indirect objectives of this scheme. These are set out below:

- Objective 1 - Reduce reactive maintenance
- Objective 2 - Improve public perception
- Objective 3 - Deliver a financially sustainable scheme package which limits long-term maintenance liability

- Objective 4 - Deliver scheme to the programme
- Objective 5 - Maintain or improve the local environment around the scheme

The Economics of Road Maintenance Report (Gould et al 2013) produced by Transport Research Laboratory (TRL) on behalf of RAC Foundation and the Association of Directors of Environment, Economy, Planning & Transport (ADEPT) suggests that timely treatment of assets can keep them in a good state of repair and reduce or delay further degradation. While this incurs earlier costs it can avoid greater costs in the future and therefore reduce net present costs to the highway authority. It also implies that planned maintenance regimes may:

- Reduce accident rates;
- Reduce wear and tear on vehicles;
- increase journey times/ improve journey reliability;
- Decrease noise and vibration for adjacent properties;
- Decrease fuel consumption and emissions;
- Reduce creations of spray and dust;
- Greater impact of interventions by others;
- Reduced risk of asset failure; and
- Improved accessibility for all types of road users.

It is clear that investment in road maintenance can improve a number of factors which be measured in both a quantitative and qualitative terms.

Carriageways and footways: a detailed visual survey of both carriageway and footway surface (Carriageway and Footway Treatment Surveys) was undertaken in both 2014 and 2015 by Gaist Solutions Ltd to assist in identifying treatment options. With two consecutive years' worth of data and corresponding video imagery from both years it has been possible to detect where deterioration is occurring most rapidly.

On the carriageway the survey has highlighted a number of areas where surface distresses are indicative of **structural failures** particularly with the prevalence of transverse reflective cracking. In other locations **rutting** is a significant problem, in particular at the junctions of Carnarvon Road, Rochford Road (The Bell) and the Prince Avenue slip road.

In many locations where reflective cracking has been identified it is possible that these may due to thermal shrinkage of the concrete (CBM) roadbase. However, there is also a possibility that some cracking may be caused by localised movement and settlement of the subgrade. This cannot be ascertained without further investigation of cores and a high resolution GPR survey that will provide insight into the locations of voids, high subgrade moisture levels and degradation of roadbase and subbase materials.

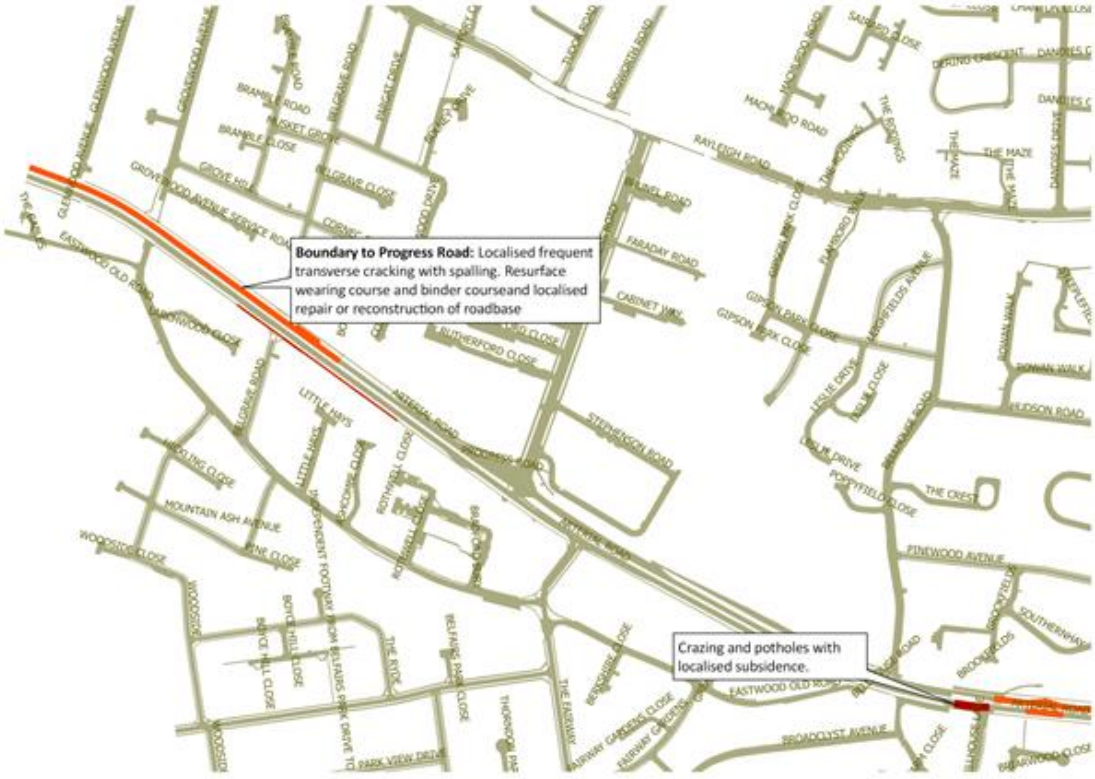
Additionally, in order to determine the overall strength of the roadbase a Falling Weight Deflectograph survey will provide important information in determining the extent of reconstruction that will be required.

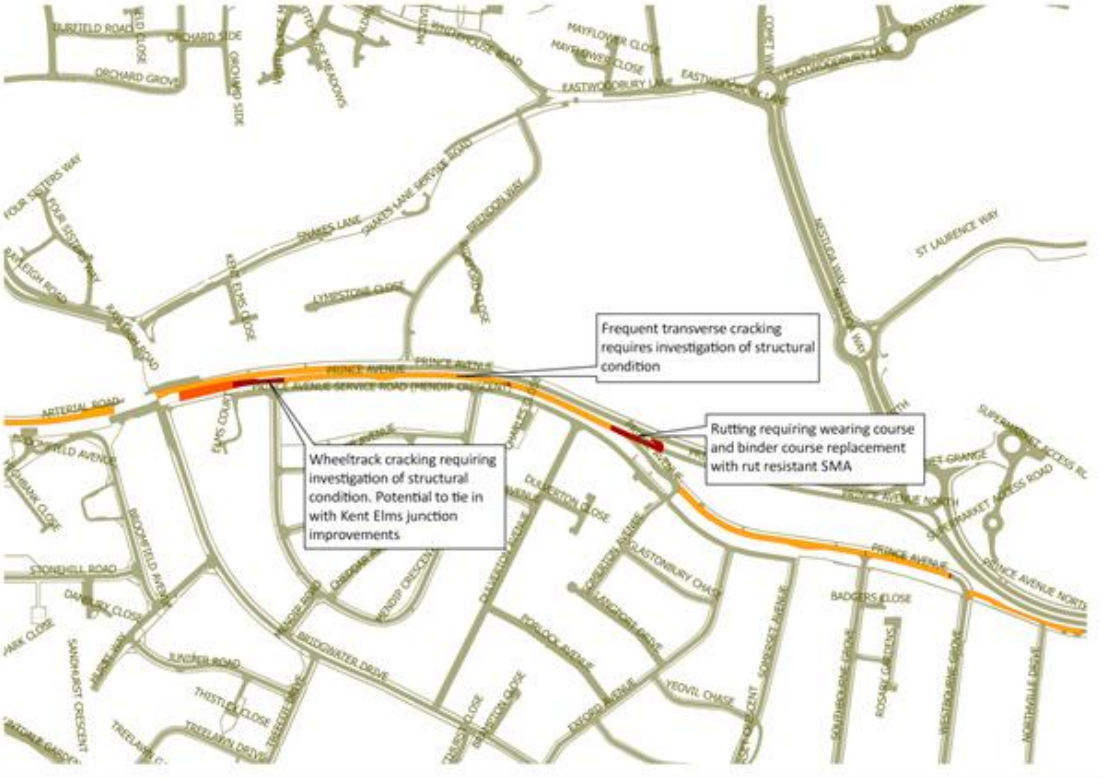
It is therefore proposed that further structural condition surveys are undertaken throughout 2015/16 and 2016/17 to establish the baseline condition and inform the need for more extensive reconstruction.

Gaist Solutions have been commissioned to develop forecasts of condition and investment requirements using deterioration models calibrated on condition data and pavement age estimates. The A127 will be modelled alongside the whole of Southend's network and this will support the value for money assessment as part of the emerging asset investment strategy for Southend's carriageways and footways. This will inform the development of the programme of works for 2018/19 to 2020/21.

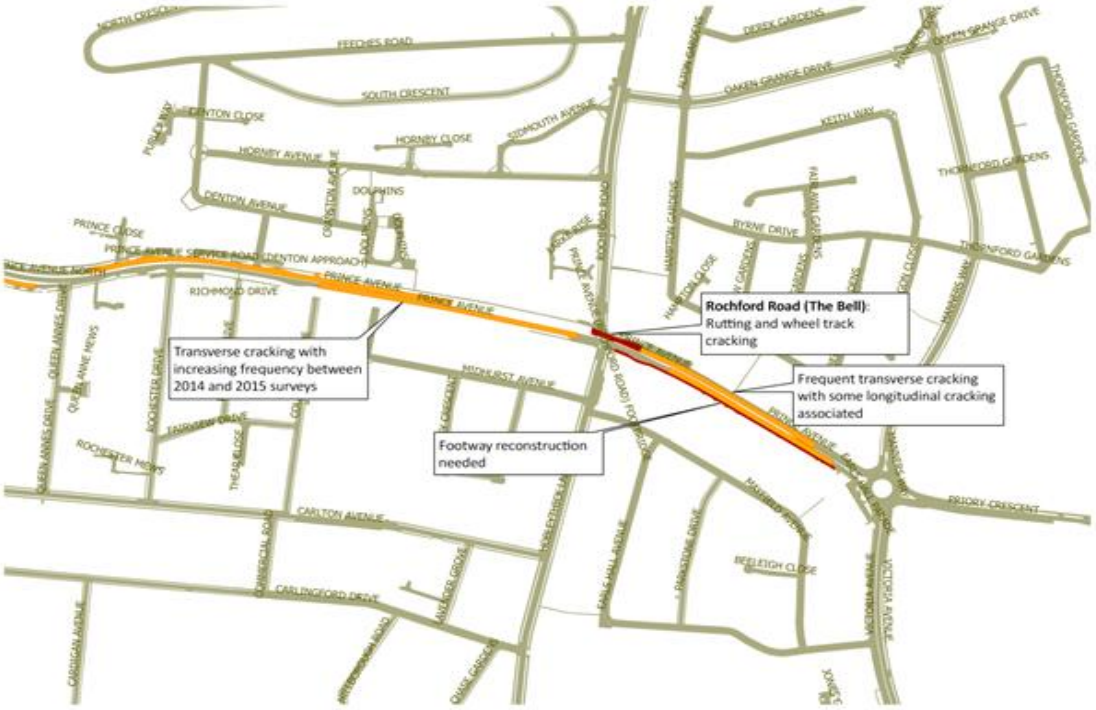
On the basis of existing data the following priorities has been identified:

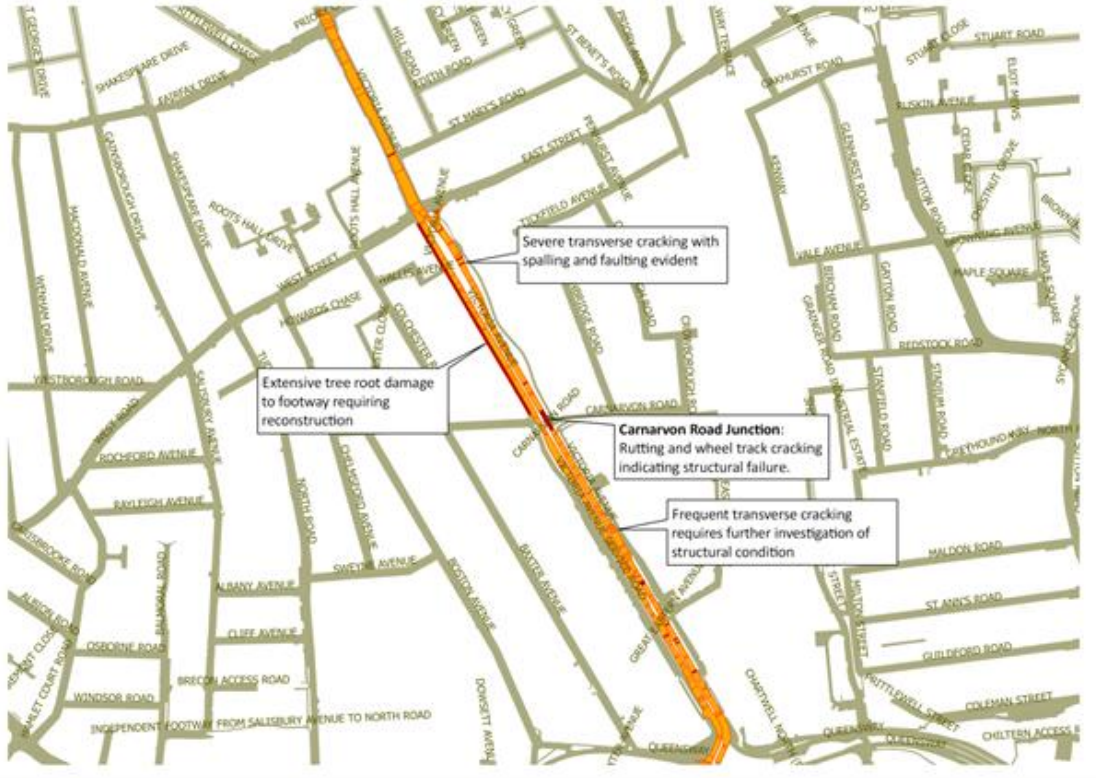
- Eastbound carriageway from Boundary to Progress Road junction – **transverse cracking** is particularly intense on the east bound section from the Boundary towards the Progress Road junction (prior to the A127 junction improvement works) and evidence indicates that the structural condition is deteriorating rapidly with **significant spalling** and severe impacts on ride quality. It is proposed to include £0.4m in 2015/16 for resurfacing of the wearing and binder course and localised reconstruction of the roadbase along this section.





- A127/A1158 Prince Avenue junction – there was evidence of significant **rutting** which was address within the recently completed A127/B1013 Tesco Junction Improvement works.
- Rochford Road junction (The Bell) – there is evidence of **structural failure including rutting and wheeltrack cracking as well as extensive problems with failed reinstatements**. It is proposed that carriageway partial or full reconstruction is undertaken alongside the capacity improvements programmed for 2018/19. Further structural condition data will be required to determine the appropriate treatment.





- **Street lighting:** it is proposed to undertake a **complete renewal of street lighting ducting and control gear along the route**. This will be programmed for 2016/17 to 2017/18.
- **Drainage:** further connectivity and CCTV surveys are required to investigate the condition of drainage including culverts and carrier pipes. As indicated above, there

are indications that structural failure may be linked to high subgrade moisture levels and redesign of drainage may be required in these locations alongside reconstruction of the carriageway.

What would happen if funding is not secured?
See Economic Case.

What is the impact of the scheme?

The potential impact of not undertaking maintenance is severe for the local economy. If maintenance is not carried out and the road fails leading to full closure, the impact would be:

- Significant adverse impact on Southend's GVA and productivity as a consequence of businesses being unable to perform their activities.
- Significant adverse impact on the leisure sector which plays a major role in Southend's economy.
- Significant adverse impact on the business sector which plays a major role in Southend's economy and future economic growth.
- Resilience – there are no realistic alternative routes to the A127 to access Southend so diversions would not work effectively. The A13 is a congested, mainly lower speed public transport corridor. The A130 is not a realistic diversionary route for east-west traffic flows.

ECONOMIC CASE

2.1 What is the latest BCR of the scheme?

The table below shows the financial projections for the A127 maintenance programme.

Year	Local Growth Fund allocation	Proposal
2015/16	£0.4m	• Resurface and localised reconstruction on eastbound carriageway from Boundary to Progress Road junction. • Commence core testing, GPR and FWD surveys.
2016/17	£0.3m	• Core testing, GPR and FWD surveys. • Drainage connectivity and CCTV surveys. • Renewal of street lighting ducting, cabling and wiring • repairs to minor structures.
2017/18	£0.3m	• Renewal of street lighting ducting, cabling and wiring • repairs to minor structures
2018/19	£1.0m	• The Bell (Rochford Road junction) carriageway reconstruction. • Drainage improvements.
2019/20	£3.0m	• Carriageway and footway reconstruction works and drainage improvements.
2020/21	£3.0m	• Carriageway and footway reconstruction works and drainage improvements.

Value for Money

The BCR for the scheme has not yet been calculated; it would be pre-emptive to undertake a value for money appraisal without having conducted surveys to fully understand the nature of the problem and investigate further the extent and best solution to types of maintenance needed.

A value for money appraisal can be undertaken following the development of deterioration models for carriageways and footways. The deterioration models for the carriageways are in turn dependent on obtaining more detailed knowledge of the structural condition and residual life of the pavement following further investigation. These deterioration models will be critical to the development of preferred options for other locations. In advance of development of deterioration models, the table below sets out the broad options that can be assessed for different scenarios and the future implications. Timescales are only provided to give an indication of the issues that will need to be considered in options appraisal.

Table 2.2 Prevalent carriageway failure modes on A127, options and network impacts

Failure mode	Options	Future deterioration	Network impact
Transverse cracking	Do nothing	Water ingress through cracks causes leaching and settlement of subgrade. Debris ingress causes additional stresses as CBM base expands and contracts leading to spalling and faulting. Increased frequency of cracks (<4m apart) causes instability as road base 'blocks' get smaller	Disruption from reactive repairs to address spalling and potholes around cracks within 2-5 years. Severe safety implications of roadbase instability would require carriageway closure within 5-15 years dependent on subgrade and roadbase condition. Full reconstruction would then be required.
	Crack seal	Cracks will continue to emerge in between sealed cracks leading instability as above. Where localised settlement causes movement of the pavement the seal will be largely ineffective.	Severe safety implications of roadbase instability would require carriageway closure within 5-15 years dependent on subgrade and roadbase condition. Full reconstruction would then be required.
	Plane and resurface wearing course and binder course with localised reconstruction and crack sealing of the roadbase	Dependent on the condition of remaining CBM roadbase Improved load transfer to roadbase should prevent rapid deterioration. Risk that reflective cracking begins to appear relatively rapidly.	Lane closures for resurfacing works Reflective cracks begin to appear 10-15 years after treatment Resurfacing or reconstruction required 15-25 years dependent on subgrade and roadbase condition
	Plane and resurface wearing course and binder course with reinforcement grid	The reinforcement grid would assist in absorbing stresses around cracks in the roadbase preventing propagation of cracks to the surface	Lane closure for resurfacing roaks Resurfacing or reconstruction required after 20-25 years dependent on subgrade and roadbase condition
	Full reconstruction of roadbase and subbase with drainage redesign		Full carriageway closure for reconstruction and drainage works Wearing course resurfacing with binder course patching requiring lane closures after 20-25 years Full reconstruction required again after 35-50 years
Rutting	Do nothing	Ruts get deeper and affect binder course Load bearing capacity of surface courses is reduced	Where structural rutting is found there may be annual traffic disruption from reactive maintenance within 2-5 years.

		leading to deeper structural failure. Where associated with wheel track cracking structural failure will have already occurred leading to rapid deterioration of the surface through further subsidence, crazing and potholes.	Within 5-10 years deep ruts will cause safety impacts increasing risk to turning traffic and cyclists particularly at junctions. At this stage the only option will be wearing course and binder course replacement.
	Plane and resurface with fibre reinforced SMA	Surfacing should provide resistance to rutting in future	Lane closures for resurfacing works Resurface after 15-25 years dependent on roadbase condition
	Reconstruction where rutting is associated with structural failure (eg wheeltrack cracking present)	Surfacing should provide resistance to rutting in future	Full closure for reconstruction works Wearing course resurfacing with binder course patching requiring lane closures after 20-25 years Full reconstruction required again after 35-50 years

Although timescales are only indicative it is immediately apparent that the structural condition of the roadbase is likely to be fundamental to understanding the economic impacts of various treatment options.

Existing evidence on economic impacts

Guidance and evidence contained within WebTAG is limited in relation to the appraisal of traffic impacts and economic costs of maintenance schemes. Indeed, available programs such as QUADRO that are often used to estimate traffic impacts of road works are not appropriate for use in urban contexts such as this.

At this stage it is useful to draw on the experience of appraisal of other maintenance schemes where network impacts have been estimated. These are typically undertaken for structures schemes where there is a clear condition based mandate for the imposition of traffic restrictions or full closure.

As indicated in the table above, **without intervention it is highly likely that some emergency closures** would be required where the roadbase has become unstable and therefore in these instances structures schemes may provide a valid comparison.

A YouGov survey (AIA, 2013) showed that poor condition local roads were costing Small and Medium-sized Enterprises (SMEs) in England and Wales approximately £5bn each year through operational inefficiencies, production delays, raw material and end product delivery delays, and vehicle repair costs, among other factors. The Confederation of British Industry (CBI) found that “94 per cent of business leaders surveyed cited road surface quality as a key concern”.

Typical BCRs for such schemes range between 10 and 40 (see, for example, the Greater Manchester Retaining Walls Maintenance Scheme). Most of these examples

come from roads carrying AADF of 20,000 - 40,000 where diversion routes are typically available with additional travel time of 10-60 minutes. In the case of A127 traffic flows exceed 70,000 AADF with no appropriate diversion route to the north or south of the corridor. Coupled with the close link to the growth prospects in the London Southend Airport business park and impacts on tourism, it is clear that even with lower relative risks of such an event occurring BCRs will be likely to be within this range.

Initially £0.4M is required for the Boundary to Progress Road scheme to be undertaken in 2015/16. In this particular case it is clear that the frequency of localised cracking indicates that widespread structural failure has taken place although the detailed design of the scheme will be informed by GPR and FWD surveys. It is recommended that this scheme is progressed prior to completion of a full Value for Money appraisal for the remainder of the programme.

Overall approach to VfM assessment

There are many complications involved in determining the wider social and economic value for money for a maintenance scheme and it is necessary to complete a number of stages before a WebTAG based assessment can be applied. In particular the following issues need to be accounted for in considering the approach to VfM assessment:

- **The need for a probabilistic approach to modelling failure and network risks**. The wide variance in deterioration rates and random nature of failures means that the use of mean times to failure as a method of forecasting future traffic impacts may yield misleading results when identifying a preferred option and would undermine the value of any detailed traffic appraisal. An alternative approach would focus on simulation of failure risk (e.g. Monte Carlo simulation) and would be more useful for the purposes of identifying a preferred option. However, in practical terms this would require broader estimates of traffic impacts as inputs. The recommended approach would therefore be to produce traffic delay estimates for a sample of 'Do minimum' outcomes as decribed in Table 2.2 on each individual stretch (indicated by the scheme locations described above) and use these as a basis for producing transport user benefit outputs in accordance with TAG Unit A1.1 (by applying appropriate VOT parameters etc). These could be applied through a MC simulation.
- **The lack of quantitative evidence of the impacts of poor road condition on the wider economy**. These would need to take into account factors such as travel time uncertainty, vehicle operating costs and the contribution of the general appearance of the public realm to local business competitiveness. Certainly we would expect the declining condition of the A127 to have a significant impact on occupancy rates in London Southend Airport however, quantifying this would require studies into demand elasticities, discrete choice models etc. that are not available.

In relation to the latter point, DfT has commissioned a study under the umbrella of HMEP to enable the quantification of road user impacts of road condition and maintenance (e.g. vehicle operating costs and traffic delays) which builds on a recent study undertaken by Transport Scotland. The release date for this study and the associated toolkit is unknown but it may coincide with the timing of further appraisal work. If this is the case then it may be possible to consider the use of parameters from this study in supporting the appraisal. However, these will not extend to enabling estimates of GVA for maintenance schemes.

Qualitative assessment of benefits
The scheme could achieve user benefits, assessed qualitatively, in respect of the following:

- Economic prosperity and efficiency –
    - User travel time delay and distance cost efficiency savings, associated with less reactive unplanned maintenance disruption and traffic diversion;
    - User journey reliability improvements;
    - Regeneration of the local economy by improving labour access to opportunities, attractiveness for business activity and number of visitors;
    - Wider economy benefits from business agglomeration, increased output and income tax revenues;
- Environment –
    - Decongestion benefits in terms of noise; local air quality; greenhouse gases; landscape; townscape; and heritage;
    - Biodiversity; and water;
- Social well-being –
    - Accidents; and physical activity;
    - Journey quality;
    - Value for non-users; affordable travel; security; access to opportunities and door-to-door options; and severance.

Taking each of the above qualitative assessments of user benefit items together, it is likely that when the BCR is calculated it will, in all likelihood, underestimate the benefits of the scheme.

2.2 Please attach an assessment of the Social and Distribution Impacts of the scheme (conducted in line with DfT guidance) including, where appropriate, include details of appropriate mitigations?

see Annex 10 for Engagement Consultation Plan

Ensuring the A127 remains open for use by delivering this programme of essential and urgent maintenance will mean necessary journeys will continue to take place whether they are for business and commuting, or for social and domestic reasons, without restriction or impediment.

Any absence of significant maintenance improvements means the road will continue to deteriorate, and any failure leading to emergency closure will have a significant and long term adverse impact on business and residents of Southend. There is no real viable alternative to the A127 for journeys – the A13 is severely congested – and hence the levels of resilience offered by the route are low.

FINANCIAL CASE

3.1 What is your estimate of the total outturn cost of the scheme?
£8m out turn value based on Term contractors rates.

Cost Heading	Currently Estimated Cost £m
Total	

3.2 Please describe any significant remaining risks to the current cost estimates?

Risk register attached in Annex 7 identifies the main key risks for the package of measures.

3.3 Please provide a breakdown of the proposed funding sources for the scheme

(a) Local Authority contribution	**£0m**
(b) LGF requested	**£8.0m**
TOTAL	**£8.0m**

3.4 What is the estimated funding profile?

£m	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Total
LA contribution							
Third Party contribution							
LGF	0.4	0.3	0.3	1.0	3.0	3.0	8.0
TOTAL	0.4	0.3	0.3	1.0	3.0	3.0	8.0

3.5 Please explain how the Local Authority contribution will be funded.
Please reference any council decisions allocating the required budget or approving any necessary borrowing etc.

Not applicable.

COMMERCIAL CASE

4.1 What is the preferred procurement route for the scheme and how and why was this identified as the preferred procurement route?

Southend-on-Sea has recently let the Highways contracts into five “Lots” which divide the work into distinct areas; Planned and Reactive Maintenance; New Works; Traffic system Control, Traffic system Maintenance and Resurfacing. The procurement process has complied with OJEU with the new contracts based on the HMEP/NEC3 Term Service Contract commencing on 1st April 2015 for initially 7 years.

The works will be carried out by the Planned and Reactive Maintenance contractor, the 7 year contractor ensures ownership of the works .

4.2 Please list the significant risks that are transferred to the contractor, and those that remain with the authority.

Refer to the Risk Register in Annex 7 which identifies the main key risks, an early risk workshop will be held with the Project Team including the Maintenance contractor to further develop the Risk Management Strategy.

4.3 Please describe how you will ensure effective contract management
Include details of reporting and liaison requirements, meeting frequency, interface of contractor with internal governance arrangements.

See below.

4.4 Please provide brief details of procurement arrangements for works outside the main contract, and what stage these have reached?

N/A these works will be undertaken by our Term Maintenance contractor.

DELIVERY CASE

5.1 Please provide details of the statutory powers you have acquired
Please list separately each power obtained, details of date acquired, challenge period (if applicable) and date of expiry of powers, and any conditions attached to them.

The works are within the Highway boundary, temporary traffic regulation orders will be in place for the works. When required NRSWA process will be followed.

5.2 Please provide details of further engagement since the BAFB with the Statutory Bodies (Environment Agency, Natural England, English Heritage)
Please include evidence of how you have taken account of their views and any requirements for mitigation etc.

The NRSWA process will be followed.

5.3 Please provide brief details of your monitoring and evaluation.

Improved Journey Times: Journey time monitoring has been carried out and recorded as a baseline figure prior to the implementation of the works on the A127 including the A127 Kent Elms and A127 Bell schemes – this data will be compared to post construction monitoring figures and the predicted journey time savings. The A127 corridor is under SCOOT control and part of the Essex wide ANPR camera system that records real time journey data.

A127 post evaluation report will be generated to summarise the above monitoring.

Safety: The number of accidents on the A127 in the three years pre construction will be compared to the three year post construction to provide a direct measure of the safety benefits of the scheme.

Environment: There are no Air Quality Management Areas in the Southend Unitary Authority area and there are no plans to monitor pollution levels related to the scheme. However, this will be taken forward as part of a route management strategy being developed with Essex County Council.

Accessibility: Increases in accessibility may be a marginal benefit to the scheme i.e. slightly lower bus journey times improving access to key services. As this benefit is likely to be small there are no plans to directly monitor this, but data will be collected in future as part of the new bus AVL system that connects all the buses via GPS to a central management system. The AVL system will be able to interact directly with the traffic signal controller to ensure that late running buses are given an advantage through the junction.

Integration: A community engagement officer has been appointed to manage the consultation process throughout the scheme delivery and ensure that issues of cohesion and severance are fully explored and the benefits of the scheme realised.

5.4 Please provide details of your construction milestones below
Please include interim milestones (at least one but no more than 5 or 6) between start and completion of

works. If the completion date has slipped from the date estimated in your BAFB please provide an explanation. Please provide a copy of the latest project plan (programme) as an Annex.

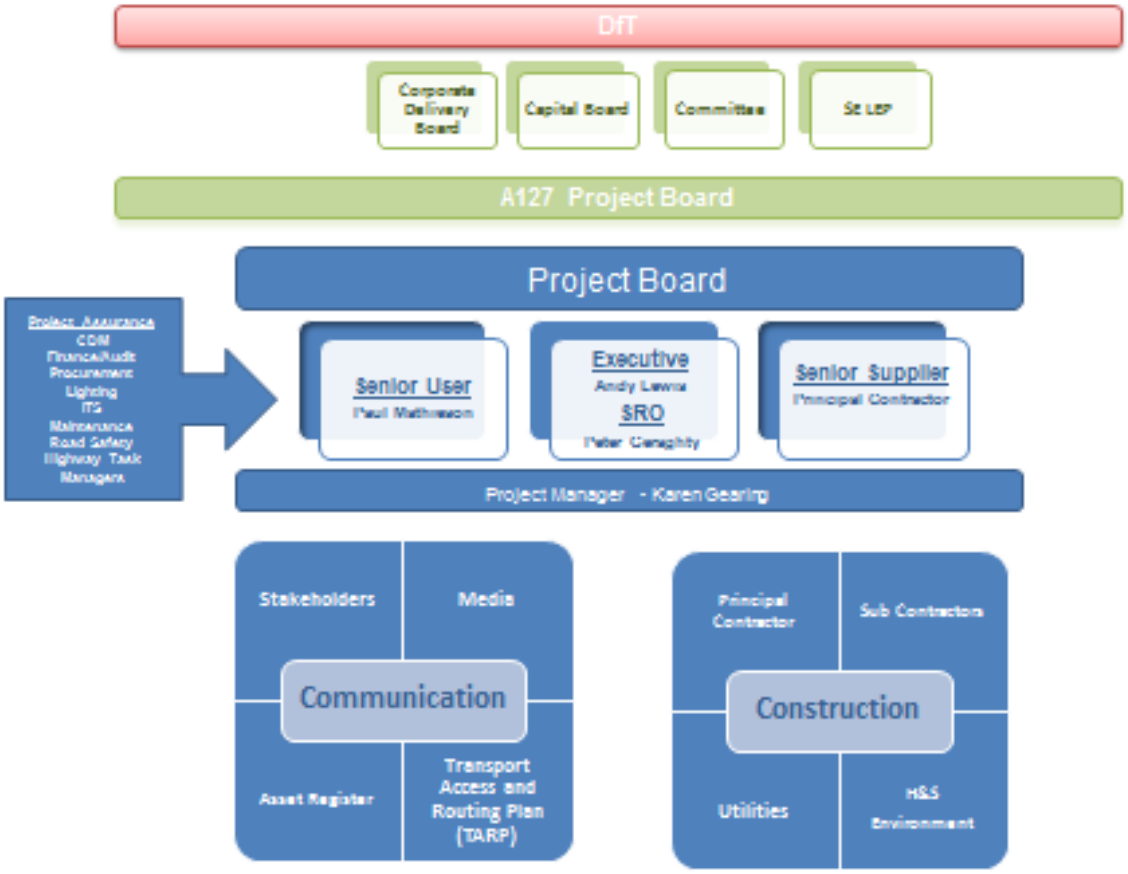
	Date estimated
Team Mobilisation	08/06/15
Start of resurfacing works	26/10/15
Completion of the works	31/03/21
Closure of Project	07/06/21

5.5 Please briefly describe the most significant risk remaining to the above timetable and attach the latest version of your project risk register (if different from the QRA risk register).

Please refer to Annex 7 for main key risks to the project.

5.6 What are the scheme's governance arrangements?
If so please provide details, including changes to SRO, Project Manager, Project Board composition, approval processes and, in particular, details of how your contractor will fit into your governance structure.

The project will be based upon PRINCE2 methodology with the Project Manager and Senior User PRINCE2 Practitioners. The organisation chart shows the governance structure that has already been put in place to agree the content of the business case and will forward into the delivery phase.



A127 Essential Bridge and Highway Maintenance
Project Structure

Southend-on-Sea Borough Council has a track record in delivering projects on time and

within budget. The “Better Southend” projects, including the A127 Progress Road Junction Improvement, the A127 Cuckoo Corner Junction Improvement, A127/A13 Victoria Gateway and City Beach Improvements were all completed on time and within budget. Collectively they were winners of the RTPI National Awards in 2011 for the Public Realm category. More recently the Pinch Point scheme A127/B1013 Tesco Junction Improvement has been completed on time and to budget with the same Key Staff being maintained for the A127 Essential Bridge and Highway Maintenance Scheme.

Andy Lewis – Corporate Director Enterprise, Tourism and the Environment – Executive
There is strong Executive Director support for this project, which experience has shown is essential for success. Andy will be ultimately responsible for the programme. He will ensure the all elements are correctly focused on achieving its aims, objectives and outcomes and reports to the Corporate Delivery Board.

Peter Geraghty – Head of Planning and Transport – Senior Responsible Owner
Peter is the Head of Service responsible for managing the strategic planning and transport functions. He will oversee the budgetary requirements and approve the resourcing and investment.

Paul Mathieson – Senior User/BCM – Chartered Civil Engineer and Prince2 Practitioner. Paul will be responsible for the quality of the elements as delivered by the Project Manager and the team. He will be responsible for ensuring alignment with strategic transport and planning policy and scheme objectives, co-ordination with other authorities and achieving value for money and delivering the benefits.

Karen Gearing – Project Manager – Chartered Civil Engineer and Prince2 Practitioner
Karen will be responsible for the project management ensuring that the project is aligned with the bid objectives, and that the appropriate monitoring is implemented to assess progress on the outputs and monitor the outcomes. Karen was responsible for delivering Better Southend major schemes the A127 Progress Road Junction Improvement, the A127 Cuckoo Corner Junction Improvement and more recently the A127 / B1013 Tesco Junction Improvement.

Project Board meetings are being held monthly in which tolerances, expenditure and outturn costs will be reported through Highlight reports issued in advance of the board meetings. The senior representatives from the contractor will attend these meetings as Senior Supplier to ensure the delivery of the project to programme and budget. Monthly Highlight reports will also be reported to the Corporate Delivery Board Chaired by the Chief Executive and attended by the Leader of the Council, S151 Officer and Corporate Directors and by the Project Manager as necessary.

Where it is thought that a project overrun will occur measures will be taken to bring the expenditure back on track without compromising the scheme objectives. Risks and issues will be reviewed and early warnings.

Other Key Staff – The bid has been prepared in partnership with the Council`s Maintenance, ITS, Traffic Management and Road Safety Teams and finance officers, which will continue throughout the life of the project. The Council’s Community Engagement Officer, Ashley Dalton, is the Stakeholder Team Leader. She is currently also leading on the consultation process for the A127 Kent Elms, and The Bell schemes which provides

continuity for the A127 projects.

5.7 Please provide evidence of previous project delivery, including details of the action taken or planned.

The Council has successfully delivered the following DfT / government funded projects:

A127 Progress Road Junction Improvement £4.7m (HCA & SBC funded) A127 Cuckoo Corner Junction Improvement £5m (DfT & SBC funded) A127 Victoria Gateway £6.7m (HCA & SBC funded) City Beach £6.7m (HCA &SBC funded). Collectively they were winners of the RTPI National Awards in 2011 for the Public Realm category.

DfT's Local Pinch Point Fund for Southend's £4.7m A127/B1013 Tesco Junction Improvement scheme was completed on time and to budget. It has been a success as the Communications Plan included early contractor involvement and early public consultations. This project utilised PRINCE2 methodology, which has ensured good time management, control and organisation of the project.

The Council carried out Better Bus Area schemes during 2012/13 – 2013/14 funded by DfT. The main lesson learned was to consult the bus user groups, particularly elderly and disabled users, other road users and the bus companies before implementing any changes. Public involvement enabled participants to rightly claim that their contribution made a positive difference. Other lessons learned were; the need to monitor and evaluate progress throughout the implementation period. On completion, annually report on outcomes highlighting any key outcomes.

Data collection was ongoing and recorded energy savings, reduction of carbon emissions, modal changes and changes in traffic patterns. A day-to-day diary was maintained during implementation in which all salient events were recorded. The usual Health and Safety files were kept separately. The spend profile was recorded in order to assist future projects. Results were disseminated to the DfT and local authorities to assist future projects.

Southend successfully received LSTF funding to promote sustainable modes of travel. This project will encourage walking and cycling including mornings and evenings. This project is consistent with LTP3 polices and the Low Carbon Energy and Sustainability Strategy (LCESS), supporting the street lighting project.

5.8 If not provided in previous submissions, please provide a copy of your benefits realisation plan.

The table below provides a summary of the proposed measurement and thresholds of acceptability that will be used to evaluate the benefits of the scheme.

Monitoring Indicator	Measurement	Threshold
Journey times	Improved Journey times	Reduction in journey time within 3 year period compared with pre implementation
Safety benefits	Recorded no. of incidents of damage due to poor condition of the road surface	Reduced number of claims within up to 3 year period post 20/21 completion compared with existing data
Safety benefits	Recorded no. of incidents of damage due to flooding of the road surface	Reduced number of claims within up to 3 year period post 20/21 completion compared with existing data
Maintenance benefits	Amount of money spent carrying out reactive maintenance	Reduction in spend on reactive maintenance within the A127 study area

Southend Borough Council will conduct a full evaluation of the impact of the scheme in the period after it is completed. The Council will prepare evaluation reports one year and five years after scheme opening, using the information to be collected as set out above to gauge the impact of the scheme, and assess the success in meeting the scheme objectives. Unexpected effects of the scheme will be reported upon and, where appropriate, remedial measures identified.

5.9 Please provide brief details of major stakeholder and public engagement carried out and further engagement planned during construction.

Please provide a copy of your Stakeholder Analysis and Communications Plans.
Please also highlight whether any significant shifts of stakeholder opinion have taken place or new issues have arisen and describe and how you are responding to them.

Refer to Annex 10 for Engagement and Consultation Plan

Stakeholder engagement will commence in June 2015 for the A127 Essential Bridge and Highway Maintenance project. Previous consultations on the A127 have focused on engagement for the A127 Kent Elms, Tesco and Bell Junction Improvement projects which commenced in 2012. The engagement and consultation plan is contained in Annex 10 and identifies stakeholder mapping, stakeholder analysis matrix, engagement types, strategies and action plan. This will be further developed to take on board lessons learnt from recently completed A127/B1013 Tesco Junction Improvement.

SENIOR RESPONSIBLE OWNER DECLARATION	
As Senior Responsible Owner for A127 Maintenance Scheme I hereby submit this request for Full Approval to DfT on behalf of Southend-on-Sea Borough Council and confirm that I have the necessary authority to do so. I confirm that Southend-on-Sea Borough Council has acquired all the statutory powers (Traffic Regulation Orders excepted) necessary to construct the scheme.	
Name: Peter Geraghty	Signed:
Position: Head of Planning and Transport	

SECTION 151 OFFICER DECLARATION	
- As Section 151 Officer for Southend-on-Sea Borough Council I declare that the scheme cost estimates quoted in this bid are accurate to the best of my knowledge and that Southend-on-Sea Borough Council has allocated sufficient budget to deliver this scheme on the basis of its proposed funding contribution at section 3.4(a) above - accepts responsibility for meeting any costs over and above the contribution requested, including potential cost overruns and the underwriting of any funding contributions expected from third parties - accepts responsibility for meeting any ongoing revenue requirements in relation to the scheme - accepts that no further increase in funding will be considered beyond the maximum contribution requested	
Name:Joe Chesterton	Signed:

CONTACT DETAILS FOR FURTHER ENQUIRIES	
Lead Contact: **Position:** **Tel:** **E-mail:**	Paul Mathieson Major Projects and Strategic Transport Policy, Group Manager 01702 215321 paulmathieson@southend.gov.uk
Alternative Contact: **Position:** **Tel:** **E-mail:**	Karen Gearing Major Projects Project Manager 01702 215363 karengearing@southend.gov.uk

CONTACT DETAILS OF YOUR CHIEF FINANCE OFFICER (If the scheme is granted Full Approval we will need these details for the formal offer of DfT grant)	
Name: **Job Title:** **Full Postal Address:** **Email**	

SUMMARY OF ANNEXES REQUIRED

Annex No	Description
1	Not Used
2	Not Used
3	Not Used
4	Not Used
5	Not Used
6	Project Plan (Programme)
7	Project Risk Register
8	Not Used
9	Not Used
10	Engagement and Consultation Plan
11	Not Used

Annex 1 – Revised TEE, AMCB and Public Accounts Tables (in Excel form)

To be confirmed

Annex 2 – Social and Distributional Impacts analysis

Not Used

Annex 3 – Detailed cost estimate

Not Used

Annex 4 – Quantified Risk Assessment

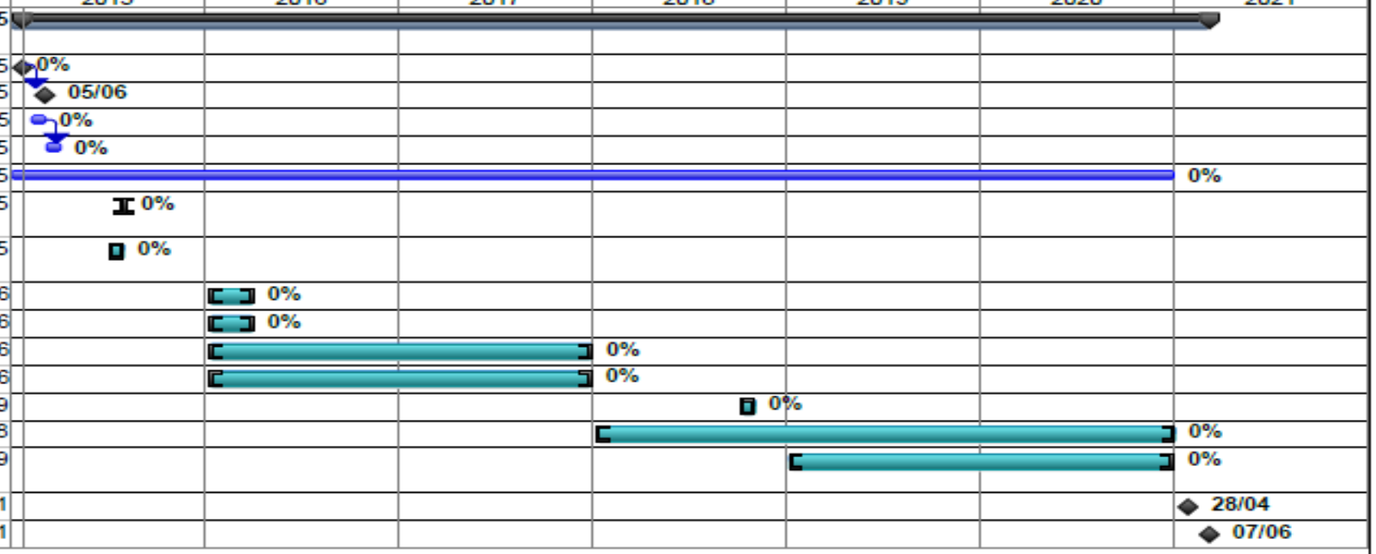
Not Used

Annex 5 – Evaluation Plan

Not Used

Annex 6 – Project Plan (Programme)

ID	Task Name	Start
1	**A127 Essential Bridge and Highway Maintenance**	Fri 24/04/15
2	Submit Business Case	Fri 24/04/15
3	Funding Approved	Fri 05/06/15
4	Project Initiation	Mon 11/05/15
5	Project Team Mobilisation	Mon 08/06/15
6	Stakeholder Consultation	Fri 03/04/15
7	Boundary - Progress Road resurfacing works	Mon 26/10/15
8	Commence core testing, GPR, FWD surveys	Mon 05/10/15
9	Core testing, GPR, FWD surveys	Mon 11/04/16
10	Drainage Connectivity & CCTV surveys	Mon 11/04/16
11	Renewal of street lighting ducting	Mon 11/04/16
12	Repairs to minor structures	Mon 11/04/16
13	The Bell carriageway reconstruction	Mon 07/01/19
14	Drainage Improvements	Mon 09/04/18
15	Carriageway & Footway reconstruction works	Mon 08/04/19
16	Completion of the Health & Safety File	Wed 28/04/21
17	Closure of Project	Mon 07/06/21



A127 Major Maintenance.mpp Fri 24/0

Critical	Milestone	Manual Task
Critical Split	Summary Progress	Duration-only
Critical Progress	Summary	Manual Summary Rollup
Task	Project Summary	Manual Summary
Split	External Tasks	Start-only
Task Progress	External Milestone	Finish-only
Baseline	Inactive Task	Deadline
Baseline Split	Inactive Milestone	
Baseline Milestone	Inactive Summary	

Annex 7 – Project Risk Register

Project Name: A127 Essential Bridge & Highway Maintenance
Date: April 2015

Crit1 Sort | Crit2 Sort | Overall Sort

Risk ID No	Risk Description	Likelihood	Cost Severity	Time Severity	Cost Severity Importance Indicator	Cost Risk Ranking	Time Severity Importance Indicator	Time Risk Ranking	Combined Ranking	Risk Owner	Mitigation Action 1
1	location of Utility apparatus change scheme viability	3	1	5	3.00	Low	15.00	High	High	SBC	Early C2 inform preliminary design and bids
4	Traffic Management Proposals/TRO's unacceptable to SBC	3	1	5	3.00	Low	15.00	High	High	SBC	Utilise the Transport Access and Routing Plan (TARP) as per previous Better Southend major schemes to ensure coordination with major schemes programme, permit team and Essex County Council ongoing works and stakeholders. Ensure drivers are informed via www.bettersouthend.com website, tweets, variable message signs and media.
8	Negative Response to Business case Submission	3	1	5	3.00	Low	15.00	High	High	SBC	Limited Control Available. SBC ensure good business case is put forward.
2	Stakeholders Consultation causes review of proposals	4	3	3	12.00	High	12.00	High	High	SBC	Scheme carried out in accordance with Prince2 Principles reporting to A127 Project Board meetings with Principal Contractor as Senior Supplier, reporting to Corporate Delivery Board, Capital Board and in accordance with relevant programme of Committee requirements. Ongoing communication with Members, Residents, local businesses and travelling public. Maintain dedicated www.bettersouthend.com website. Carry out consultation early in design. Hold regular stakeholder update events. Scheme Support from SBC Media (As per A27 Tesco Scheme). Scheme carried out within the recognised "Better Southend" programme of schemes.
7	Works Exceeds Available Budget	2	5	4	10.00	Medium	8.00	Medium	Medium	SBC	Review Gaist outputs, FWD, GPR Drainage surveys and priorities essential works
5	Tender documents issued late	2	1	3	2.00	Low	6.00	Medium	Medium	SBC	Project board to ensure sufficient resources
6	Pre-Order of long lead time materials not ordered in time to allow certainty of delivery	2	3	3	6.00	Medium	6.00	Medium	Medium	SBC	Early contractor involvement to assist in the identification of long lead materials
12	Objections to Traffic Regulation Orders	1	2	5	2.00	Low	5.00	Medium	Medium	SBC	SBC to ensure process is followed and adequate time allocated to stakeholder consultation

Annex 8 – Project Assurance Recommendations

Not Used

Annex 9 – Benefits Realisation Plan

Not Used

Annex 10

Engagement and Consultation Plan

Project name: **A127 Essential Bridge and Highway Maintenance**
Impact analysis: **HIGH IMPACT**
Start date: April 2015
Completion date: Ongoing - post 2020/12
Lead manager: Karen Gearing
Information reviewed prior to consultation plan:
Traffic data
Accident data
Bridge data
Gaist data
Accessibility and capacity of the junction
Concerns raised by Cllrs
Formal assessment taking place

Statutory consultation? NO
Assessment of local needs completed? NO
If no, will this be part of the project? YES
Reason for project:
To improve the infrastructure of the A127 from Borough Boundary to Town Centre focusing on Carriageways, footways, drainage, bridges and lighting to enable the efficient movement of people and goods to improve economic growth in Southend and surrounding areas.
Changes proposed: Yet to be decided based on options review
What constraints are there?
Budget
Funding yet to be secured (earliest prediction 2015)

Has a budget been identified to pay for related engagement and consultation work? If so, how much?

YES £10k.

Any local issues/sensitivities/politics to be taken into consideration?

- *Across 6 wards – Eastwood Park/ Blenheim Park /St Laurence/ Belfairs/Prittlewell/Victoria, but impact will be much wider*
- *Bridges could be affected (not DDA compliant)*
- *Impact on business and residents particularly during construction stage*
- *How could we engage schools?*
- *Could trees be affected?*
- *Need to build up our contact lists*
- *Map the circle of impact and link to discussion with ward members*

Consultation and Engagement Mandate

Southend on Sea Borough Council Major Projects and Strategic Transport Policy Group need to understand the views of **residents, the travelling public and businesses in the immediate area affected as well as residents across the town and stakeholders including the emergency services, Parks department, elected members and Equality Analysis impacted groups** concerning **the issues, needs and uses of operation of A127** so that **the Major Projects and Strategic Transport Policy Group** can **assess and progress maintenance improvements to the A127 to ensure it is fit for purpose** to **accomplish the delivery of a fit for purpose project with minimal negative impact upon stakeholders during survey, design, construction and maintenance.**

Stakeholder mapping

<table>
<tr>
<td colspan="2">Directly impacted
Schools
Health Centre
Library
Local businesses
Bus companies
Rail
Hospital
Airport users
Freight

Emergency services
Statutory undertakers
Road users
Pedestrians
Cyclists
Residents in the immediate area</td>
<td colspan="2">Indirectly impacted

Cory Environmental
Road user groups
Southend United Football Club</td>
</tr>
<tr>
<td colspan="2">Potentially impacted

Schools in the wider area
Driving instructors
Essex County Council
Seafront Traders
Town Centre Partnership
Parks Department

All residents
All businesses
Chamber of Commerce
Federation of small businesses
Southend Business Partnership
Events team</td>
<td colspan="2">People who can help

SBC Chief Executive
Leader of the Council
Director of SBC ETE
SBC Head of Planning and Transport
Cabinet
Portfolio Holder
Media and Communications Group
Southend Blind Welfare Association
Residents' Associations
Ward Councillors
London Southend Airport
Southend Business Partnership

SBC
The Evening Echo
Media
All members
Staff
SELEP
Local Transport Body
Highways Department
DfT
Funding bodies
DIAL
Essex County Council</td>
</tr>
<tr>
<td colspan="2">People with specialist knowledge we could use

Cycling Groups
Road user groups</td>
<td colspan="2">People who have an interest

British Horse Society
Ward Councillors
SKIPP

ACT Travelwise
The Echo
Seafront Traders
Town Centre Partnership</td>
</tr>
</table>

Stakeholder analysis matrix

Influence

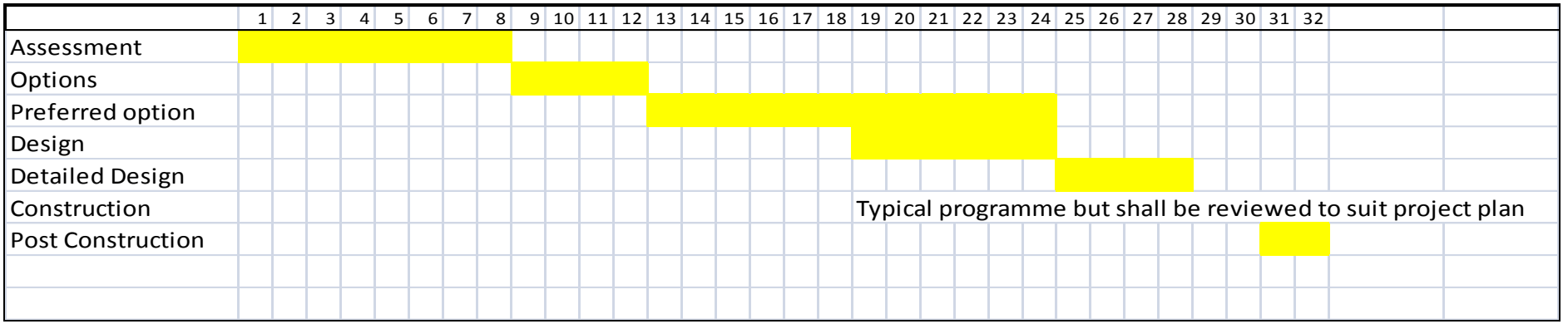
• Highly visible engagement methods • Relationship building • Potential for increased interest DfT Events team SELEP SUFC Utilities	• Ensure communications are well informed • Methods may be high capacity • Ensure transparency Airport All members Raill Cabinet Chamber of Commerce DIAL Emergency services Federation of small business Hospital Local residents in immediate area Media Portfolio holder Resident Associations Road user groups Road user groups Seafront Traders Senior leadership team SKIPP Southend Blind Welfare Association Southend Business Partnership Ward members
• Promote right to participate • Use easily accessible measures • Welcome all comers Airport users Rail users ATC Cory Driving instructors Schools in wider area SOSBC Media and Communications Freight	• Go looking for them rather than wait for them to come to you • Actively seek to understand agendas • Use stakeholder specific methodologies • Be judicious in identifying and approaching key stakeholders All residents British Horse Society Bus companies Businesses Cycling groups Cyclists Essex County Council Local schools Pedestrians Petrol station Road users

Interest

Engagement types and strategies

ENGAGEMENT TYPE	INVOLVE	CONSULT	INFORM
PROJECT STAGE	ASSESSMENT STAGE	PREFERRED TREATMENTS	END OF ASSESSMENT STAGES END OF DETAILED DESIGN CONSTRUCTION POST CONSTRUCTION
STRATEGIES	TRAFFIC SURVEY PEDESTRIAN SURVEY ACCIDENT STATISTICS BACKGROUND DATA FOCUS GROUP OR WORKSHOP INTERNAL CONSULTATION WITHIN SoSBC PLANNING FOR REAL EXERCISE	FORMAL CONSULTATION DOCUMENT CONSULT INTERNALLY PUBLIC EXHIBITION WORKSHOP/MEETING SEEK FEEDBACK THROUGH NETWORKS AND EMAIL LISTS PRESENTATION TO INTERESTED GROUPS WEBSITE FEEDBACK LISTENING POST USE VISSIM MODEL	ENSURE DMT INFORMED THROUGHOUT USE THE COUNCIL'S WEBSITE ISSUE PRESS RELEASE UPDATE VIA EMAIL LISTS ENSURE FEEDBACK TO ANYONE PREVIOUSLY INVOLVED PUBLIC DISPLAY USE PARTNERS' NEWLETTERS OUTLOOK FACTSHEET

Stage Timescales



Action Plan

Stage	Activity	Resources	Stakeholders engaged	Dates
Assessment	explore issues and begin stakeholder conversations		All comers.	To be timetabled
Assessment	Traffic survey			To be timetabled
Assessment	Pedestrian survey			To be timetabled
Assessment	Accident statistics			To be timetabled
Assessment	Background data			To be timetabled
Assessment	1:2:1 meeting with senior management team			To be timetabled
Assessment	1:2:1 meeting members			To be timetabled
Assessment	1:2:1 meeting ward members			To be timetabled
Assessment	Internal consultation – drop in session			To be timetabled

End of Assessment	Circulate outcomes report to stakeholders from workshop			To be timetabled
End of Assessment	DMT/ programme board report/Committee report?			To be timetabled
Assessment feasibility	Online findings report and next steps notification			To be timetabled
Options	Deterioration model/Charette to come up with options			To be timetabled
Options	1:2:1 meeting with senior management team			To be timetabled
Options	Internal consultation – drop in session			To be timetabled
End of Options/ Preferred option	DMT / programme board report/Committee Report			To be timetabled
End of preferred option	DMT/ programme board report/Committee Report?			To be timetabled
End of preferred option	Online findings report and next steps notification			To be timetabled
Design	Equality Analysis			To be timetabled
Design	Design review – internal design charette			To be timetabled
End of detailed design	DMT/ programme board report/Committee Report			To be timetabled
End of detailed design	Online findings report and next steps notification			To be timetabled
End of detailed design	Partners' newletters			To be timetabled
Construction	Formal notifications			To be timetabled
Construction	Advertise and deliver regular community engagement surgeries			To be timetabled
Construction	Press release			To be timetabled
Construction	Email updates to all previously engaged and interested groups			To be timetabled
Construction	Factsheets			To be timetabled
Post construction	Article in Outlook Press release			To be timetabled

Annex 11

Not used