

Annual Plan 2018-19



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Introduction

Highways are important to everyone – roads and footways underpin people's ability to travel, get things done and power the Essex economy...

This Annual Plan is an overview of our strategy to deliver the task orders and budgets as detailed in the individual Service Plans for 2018-19.

The Essex Highway asset is vast; covering over 5,100 miles of roads, 1,500 bridges, 4,000 miles of Public Rights of Way and 127,000 street lights. It is the seventh largest network in the country and has some of the heaviest traffic flows. Like any built environment, natural deterioration occurs through aging and weathering.

Budgets are limited and it is critical that we plan ahead to maximise the use of our resources, protect the existing infrastructure and prioritise works that deliver best long-term benefit. Our Asset Management Strategy is a carefully considered whole-life approach. Our deep data-driven knowledge of asset condition, county priorities and the most cost effective and technologically innovative engineering solutions, maximises the benefits of investments for all highway users.

We aim to deliver programmes that pre-empt problems and deal with multiple issues at once, resulting in cost savings, reduction of risk and enhanced performance. Our objectives are to;

- Meet customer needs.
- Obtain value for money.
- Promote improvement and innovation.
- Help ECC realise its strategic aims 2017-2021.
- Reduce the cost of the Service.

These objectives are to be achieved through delivering value for money, innovative and quality services, while aiming to improve public satisfaction with all aspect of the highway network. To help deliver this, we must maximise the commercial and strategic opportunities that are available through this partnership.

The Essex Highways partnership is working to create a highway network of which the residents of Essex will be proud.



**Councillor Kevin Bentley,
Deputy Leader, Essex County Council and
Cabinet Member for Infrastructure**

Improving our roads and footways

Effective asset management of roads and footways leads to a safe, accessible, serviceable and sustainable highway network which is vital for providing access to key services such as employment, healthcare, education, social services, sports and leisure

The adoption of an 'Asset Led' maintenance strategy in 2016 will continue to be the key in developing the most sustainable maintenance programme possible. This strategy ensures informed evidence based decisions are made on maintenance in order to shift focus away from expensive reactive maintenance towards long-term planned works.

An 'asset-led' approach means investing in road and footpath maintenance at carefully planned intervals over the lifecycle of each route. It's about implementing preventative maintenance at regular intervals to reduce the need for expensive repairs in response to separate faults. With clear priorities established, our strategic roads are inspected and maintained regularly and performance measured.

The Council's strategy for footways including shared use footway / cycleways is to improve the condition of its most heavily used footways while maintaining the functionality of the remaining footway network.

Funding of roads and footways comes from both revenue and capital budgets. The largest funding is the capital investment although this is being reduced by £17m or 23% for 2018-19. The current strategy is to focus primarily on the PR1 & PR2 County Routes which makes up 40% of the network and where the main traffic flows are concentrated. The budget for the PR1 & PR2 County Routes has been maintained for this year with the budget reductions directed at the local roads and footways.

The revenue funding is targeted towards the PF1 & PF2 high footfall footways, such as town centre areas, providing reactive maintenance response to reported / identified defects together with PR1 & PR2 roads on the County Routes network.

The County Council owns and maintains a variety other highway infrastructure and the focus is to direct/manage the funding around this wide range of assets, all of which perform important functions in the network, some for safety, some to manage congestion, some to gather data to inform future programmes.

The long term forward programme of capital maintenance schemes is identified and prioritised through the lifecycle planning process. A preventative approach is at the heart of the prioritisation process. The most appropriate and cost-effective materials and techniques are used with repairs being prioritised and significant safety issues are given most urgency.





**2.47 miles
of safety
barrier to be
repaired**

In 2017/18 work commenced on the review of the Council's Highways Maintenance Strategy to ensure that ECC is compliant with Well Managed Highway Infrastructure Code of Practice and continues to be recognised as a leader/at the cutting edge of asset management. The aim is to make the best possible use of available budgets and this review is to be completed and approved by October 2018.

Essex Highways achieved the status of "Level 3 of the Department for Transport Highway Maintenance Incentive Fund" in 2017/18. This is a central government funding which is the highest level, which will allow ECC to continue to secure funding from DfT when a good asset management approach is implemented. The aim is to maintain this standard during 2018/19 as this brings into Essex a total of £4.119m of additional highway funding.

The preventative approach aims to reduce the formation of localised defects on treated roads, leading to a reduction in the revenue budget spent on reactive maintenance. This approach, which aligns with Highways Maintenance Efficiency Programme (HMEP) guidance, has been fundamental to the County Council's asset management strategy for many years.

The Highways Maintenance Efficiency Programme (HMEP) is a £6million, Department for Transport funded and sector led transformation programme. HMEP connects networks from across the highways sector and provides the tools and resources to ignite ideas and help leaders and managers to transform delivery of roads and services through greater efficiencies.

Sustainability will be further reinforced by means of continued efficiencies to drive across the business and by aiming to build on Essex Highway's current innovative approach to working.

A Materials Working Group (MWG) within the Highways service, reviews and updates current specifications and treatment options to include the latest materials and technologies where relevant to achieve efficiency savings, and to reduce waste, carbon footprint and energy consumption.

Working closely with Ringway Jacobs' shareholders, in particular with Eurovia's specialist pavement consultancy, Jean Lefebvre UK, the service benefits from their extensive knowledge and expertise across the UK and overseas, and gains insight into new products emerging from Eurovia's extensive pavement research and development facilities which may benefit the Essex highway network. The MWG identifies various new materials and techniques to be considered by Essex Highways and Essex County Council for a contract trials.

'THE MOST APPROPRIATE AND COST-EFFECTIVE MATERIALS AND TECHNIQUES ARE USED WITH REPAIRS BEING PRIORITISED AND SIGNIFICANT SAFETY ISSUES ARE GIVEN MOST URGENCY'



**55 miles
of footways
to be
resurfaced**

Safety and wellbeing

Health and safety remains at the heart of everything we do and since its introduction by Ringway Jacobs at the beginning of 2015, 'Think Safe, Home Safe' has quickly established itself as a cornerstone of Essex Highways' culture

It is our long term initiative designed to strengthen and reinforce the safety culture within our business and provide a safe working environment to ensure our employees go home safely at the end of each day.

Our health and safety objectives are enhanced annually and the campaign introduces 12 new themes throughout the year, supported by online training modules and Tool Box Talks.

Successful safety challenges, investigations and the implementation of continuous improvement practices ensure that we learn from incidents as they occur and prevent future ones from happening.

Full details of all incidents can be located in our 'REPORT IT' tool. During 2017, Ringway Jacobs raised 5013 near misses, up 18% on the previous year. As we donate £1 for each near miss reported, this means we donated a total of £5013 to charity.

The money was divided between our five contracts according to how many near misses they submitted during 2017. Essex donated its share to the Essex and Herts Air Ambulance, raising £1632.

£1632
donated to Air
Ambulance
through
'near miss'
reports



Combatting Road Worker Abuse

In recent years, Essex Highways has seen several incidents where employees have been threatened - and we believe many cases aren't reported. Employees across the county have been spat at, had urine thrown at them and even been threatened with knuckle dusters.

Acknowledging some of the frustrations caused by road works that the public are subjected to, our employees are trained in conflict resolution and to remain calm as they explain what they are doing and why. Despite this, some members of the public still behave appallingly towards them.

Essex Highways employees are encouraged to report every incident in order to gather as much data and evidence as possible.

To support this, 62 CCTV signs which include the Essex Police logo will be displayed in Traffic Management areas and the gathering of evidence is increasing in order to prosecute where possible. 27 Bodyworn cameras have been purchased for the Essex

contract and will soon be rolled out to employees.

In February 2018 we put forward 50 prosecutions - the successful prosecution of offenders will send a stronger message out to those that perpetuate road worker abuse.

Positive Mental Health Champions

Through Ringway Jacobs, Essex Highways has its own 'Open Minds, Healthy Minds', having recruited volunteers from across the contract and trained them to create a network of Positive Mental Health Champions.

The introduction of the new PMHCs gives all employees direct access to someone to talk to about mental health and wellbeing issues. This will have a positive impact on, not only our direct employees, but also, potentially, our supply chain partners, friends and families.

The PMHC core group has already produced a Mental Health and Wellbeing Policy and is working to develop a strategy for delivering positive mental health and wellbeing.

Quality

National recognition of the standard of Essex Highways operations

Essex Highways is a strategic partnership between Essex County Council and Ringway Jacobs, a leading highways service provider working with local authorities across the UK. Through Ringway Jacobs, Essex Highways is accredited to the following standards;

- BS ISO 9001 – Quality Management Systems
- BS ISO 14001 – Environmental Management
- BS ISO 45001 – Occupational Health & Safety
- BS ISO 55001 – Asset Management
- BS 11000 – Collaborative Working

The partnership was one of the first relationships of its kind in the United Kingdom to achieve accreditation to BS11000 – the Collaborative Business Relationships standard and embraces ECC, Ringway Jacobs and Supply Chain partners.

BS 11000 is being replaced by BS ISO 44001 and Essex

Highways is in the process of migrating to this new standard. A pre-audit with the British Standards auditor has been held to identify any potential issues and all is on target for a successful transitional audit which is scheduled for September 2018 - after all, this is an industry leading model and currently stands as the largest highway services partnership in the UK.

Essex Highways was one of the first organisations in the country to be accredited to BS ISO 55001 Asset Management of footways and carriageways in March 2017. The focus for 2018/19 is to maintain this accreditation and to expand this to include other asset groups such as Street Lighting, Intelligent Traffic Systems (ITS) and Structures.

BS ISO 45001 replaced OHSAS 18001 - Occupational Health & Safety and became current in March 2018. Essex Highways was the first organisation in the country to be awarded this accreditation.





Efficiencies and Innovations

Efficiencies are improvements in the way services are delivered or improvements in the procurement of goods and services which results in delivering more for the same cost or the same for less cost

Efficiencies can be classified as cashable and non-cashable. Non-cashable efficiencies are those where the effectiveness of the service is improved but while there are benefits resulting from the change, no financial savings are made.

With the budget constraints that are prevalent currently within Essex County Council, the focus is on delivering those efficiencies where budget reductions (cashable efficiencies) can be made. These can either be one-off savings (a change of material or process for an individual project) or sustainable or year on year savings such as the renegotiation of a supply contract.

Innovations are new things or a new method of doing something and is crucial to the continuing success of any organization.

Essex Highways has established a reinvigorated joint efficiency pipeline to complement the New Efficiency Mechanism. The following efficiencies and innovations are under development for 2018-19;

- a) A number of process improvements are planned to reduce risk exposure and improve quality of delivery.
- b) A key intervention is the full trial of vehicle removal powers on all surfacing sites in 2018-19.
- c) Ringway Jacob's Project Unity is focusing on improvements to resource management, programming, budget management and forecasting, this aims to develop programme and cost management into an organisational strength.
- d) A number of planned system developments are also key to gaining service improvements with a particular focus on the electronic handling of information which will further enable the

service to become data/intelligence led as follows;

- i. Confirm will be configured further to improve decision making for reactive maintenance activities making the delivery of works more productive and ensuring policies are applied consistently.
- ii. A system to allow all works to be delivered in a fully paperless environment will be identified and trialled with the aim of reconfiguring how works are instructed, reducing administration.
- iii. Use of business analytics and reporting tools such as Microsoft Power BI and Map Essex will be further expanded to ensure the right up to date information is available in the right format and to the appropriate decision makers at any time and not reliant on the production of reports.
- iv. The Members Portal is to be developed to share live information with members so that they are better informed.
- v. Essex working with Hertfordshire will become one of the first authorities in the country to manage road closures in real time which will send that information direct to road users via apps such as Google Maps.
- vi. Continue to develop a rolling five-year forward delivery plan for Essex Highways from April 2018, (refreshed for April 2019 in January 2019) which will provide an insight into the future planned works.



Local Highway Panels (LHPs)

LHPs meet regularly to deliver small scale improvement schemes

Small scale schemes are identified by the 12 district LHPs and delivered by Essex Highways. Requests for improvements are received from a cross section of society, including local residents, Parish Councils, District/City/Borough Councillors and County Councillors and these are submitted to the LHPs for consideration.

The panels are encouraged to present particular problems for which Essex Highways trained highway engineers will provide options and appropriate solutions. In 2018-19 there is a list of 292 schemes that have been identified to be delivered within an available budget of £4.0m.

Essex Highways officers and engineers support the LHPs, giving technical advice on the feasibility of proposed schemes. The LHPs will consider all options and select the most effective and cost efficient in each case. Once validated and approved by the Cabinet Member for Highways, the scheme is commissioned

to Essex Highways to deliver. The schemes cover a range of different improvements such as Casualty Reduction and Traffic Management. A typical example might be the construction of a new pedestrian crossing in a busy high street or near a school.

As part of our asset-led approach, a much more rigid programme of works will be implemented with a focus on the appropriate level of design for the particular proposed solution. There has been criticism over the cost of some LHP schemes as costs have increased due to the limited supply chain delivering interested in delivering this type of work.

The focus for this year will be to use direct resources to deliver more schemes, the use of walk, talk and build, and new procurement methods being investigated will reduce the design time and all of these aspects will reduce the cost of delivery of the less complicated schemes.

292
planned
schemes
in 2018-19

£4.0
million
budget



**£40 million
budget for
2018-19**

Major Projects

Essex Highways' specialist team is working with Essex County Council to take advantage of the Government's strategy for major investment in highways and wider transport

Essex Highways has been very successful in securing additional funding from outside of Essex County Council and in particular the funding from South-East Local Enterprise Partnership (SELEP) and for 2018-19 from rounds 1, 2 & 3 bids.

Following on from these successful bids, investment in major improvement schemes together with funding from Essex County Council through the Essex Highways contract has increased the total investment planned for 2018-19 year to £40m, with an additional £39m forecast for 2019-20.

Essex Highways continues to develop expertise to enable more effective delivery of improvement schemes, getting it right first time and making the improvements sustainable for the long term.

Major improvements to transport infrastructure are required to keep the Essex economy growing to its full potential which are planned, developed designed and managed through construction to completion and opening.

Traffic and economic data analysis and transport demand modelling are modern tools to establish where best to implement improvement schemes. 'Micro-simulation' modelling of the effects on traffic of changes to road junctions takes much of the risk out of these schemes.

Proposed major schemes are rigorously assessed and prioritised according to strategic objectives and priorities, to ensure the maximum benefit for Essex residents, business and visitors. Through our Consultancy Services, we aim to provide non-highways services to other departments within Essex e.g. Technology Solutions, Flooding etc. Design and construct works are provided for the five-year Essex Flood Risk Programme, currently worth £2.5m.

This year the Highways Information Map initiative will be supported for the public, councillors and council staff, so that all the Major Projects data is in one place and can be shared and easily updated to gain major efficiencies. This is an industry leading project.

The planning and developing Essex County Council's strategic schemes is at various stages and includes plans for;

- New junction 7A on the M11 at Harlow including upgrades to Gildea Way.
- Improvements to junction 8 on the M11
- Developing a preferred route for the dualling of the A120 between A12 and Braintree.
- Chelmsford City Growth Package.
- A127 Capacity enhancements.
- Improvements at the A127 Fairglens junction.
- Basildon Integrated Transport Package
- Colchester Integrated Transport Package



**£79 million
budget for
2019-20**



Involved
in 1100
developments

Five area
improvements
planned

Development Management

Managing the outcome of planning applications and associated roads for adoption

The national drive towards increasing housing stock to keep up with population growth and the improving economy, brings with it pressures on the local road network and a growth in the highway estate road system.

The Essex Highways Development Management team provides the service of checking the design and construction of all works on the public highway and areas for adoption on behalf of Essex County Council.

We are also moving towards offering a scheme design and construction service with the option of in-house construction for works on the existing highway.

The Development Management team work with colleagues in the

strategic development and the planning authority to implement the outcome of planning applications and ensure the resulting new roads are constructed to a standard that is suitable for adoption by Essex County Council. This means the materials used need to be maintainable by Essex Highways as more developments are adopted, this places greater strains on the limited budgets.

We are presently involved in more than 1100 developments across the county which vary in size, from minor developments to the infrastructure for major sites of 3000+ homes, such as Beaulieu in north Chelmsford (background photo).

The expectation for the coming year is for sustained demand on our

services and increasing workload. To respond to the challenge we are developing our approach, using online interactive software which is targeted at developers providing information and application forms to speed up the process. To ensure clarity and understanding of the inspection procedures, a new booklet has been developed which outlines:

- Preliminary Site Meeting and Inspections
- Inspection Flow Chart
- Testing of Materials
- PPE Requirements for all Section 278 / Permit works.

The team oversees the Vehicle Crossing Service and over the last two years we have brought about a more efficient application process through the website and an electronic payment option.

Improvement projects

There are a number of improvement projects planned and these are;

- **Technical checks** - To improve the turnaround time for technical checks and to improve consistency to meet the 3 week check target.
- **Fee Structure** - A review of all fees in Development Management to ensure that the percentage system is correct and benchmarked correctly.
- **Workshops** – A review of specific workshops to deliver advice and guidance on requirements to improve timescales.
- **Road Work Bookings and notifications** – Investigation into the potential to include bookings within the portal system currently in development.
- **Standard Details Drawings** - Work is currently underway to develop a suite of standard detail drawings to assist in approvals and increase turnaround times.



Permit Scheme

Management and permitting of all road works on the highway and to co-ordinate works to minimise disruption to the travelling public while maintaining safety



The Street Works team is responsible for the management and permitting of all road works and the licencing of skips and scaffolding on the highway.

Through the ECC Permit Scheme, the team work to co-ordinate works to minimise disruption to the travelling public while maintaining safety. The inspection role of the team ensures that the condition of the highway asset is maintained.

During the course of the year, approximately 89,000 permit applications are processed and 57,000 asset safety inspections are made.

The Department for Transport (DfT) announcement in March 2018 the expansion of Lane Rental Schemes and the DfT will produce guidance in the autumn of 2018 to help councils develop lane rental schemes for approval. The first schemes could start by the end of 2019 and work will be undertaken by Essex Highways to investigate the feasibility of operating such a scheme in Essex and the benefits it may offer.

The DfT are in the process of developing a new Street Works system to replace the current EToN system which no longer aligns with current legislation. EToN demonstrates a lack of data transparency and accuracy making the street works journey more difficult / fragmented.

The vision for Street Manager is to transform the planning, management and communication of street and road works through open data and intelligent services to minimise disruption and improve journeys for the public.

To ensure that the voice of Essex Highways is heard, the aim is to be part of the planned DfT workshops. The planned date to introduce Street Manager is early 2019.

'THE VISION FOR STREET MANAGER IS TO TRANSFORM THE PLANNING, MANAGEMENT AND COMMUNICATION OF STREET AND ROADWORKS'



**89,000
permit
applications**

**57,000
asset
safety
inspections**

Bridges, Subways and other Structures

Using targeted maintenance to ensure the maximum life of all structural assets, providing safe and accessible passage along the highways

We look after 1500 structures throughout the county which are varied and complex in nature and consist of bridges, subways, retaining walls, culverts and headwalls. The condition of these assets requires management through regular inspections and maintenance. This inevitably leads to the design of improvements or replacement of existing structures.

On occasions, temporary weight limits are imposed on structures while the design of a repair or replacement is completed and / or funding made available. In extreme cases, the passage of traffic over the structure is restricted or prevented in its entirety in the interests of safety.

48 improvement schemes are planned to be delivered in 2018-19 at a cost of £4.4m which includes;

- Catholic Bridge, Witham
- Marks Tey Bridge
- Sheering Mill Bridge, Epping Forrest

Structures and abnormal loads

The management of abnormal loads is also a key element of managing the county's structures. An abnormal load is a vehicle that meets any of the following;

- A weight of more than 44,000 kgs
- An axle load of more than 10,000 kgs for a single non-driving axle or 11,500 for a single driving axle
- A width of more than 2.9 metres
- A rigid length of more than 18.65 metres.

Notifications are sent in by hauliers who will be exceeding the above categories and this details the route that the abnormal load will be taking. Hauliers are required to notify us within strict timescales and they must give us time to respond. Each individual bridge on the route is checked to ensure that they are capable of supporting the proposed loads.

The volume of notifications has increased with the previous high of 344 in December 2017 being exceeded with in January 2018 when 2000 notifications were received and processed. To improve the efficiency of management of abnormal loads notifications, software by Cascade, AbLoads was introduced in May 2018. It automatically enters and processes notifications from all sources.



750
Structures
inspected
annually

48
Improvement
schemes

Street Lighting

The provision of cost effective and efficient lighting for the safety of users of the roads, footways and cycleways

Highway lighting assets are a significant element of highways infrastructure. There are approximately 127,000 lighting columns, 12,000 illuminated signs and 5,600 bollards owned by the Council. Essex Highways staff repaired approximately 40,000 faults on streetlights in 2017/18 and a similar number of faults are expected in 2018-9.

As part of the asset-led approach, our aim is to maintain these assets in a safe and serviceable condition, to maximise their service life and to reduce ongoing energy usage and reactive maintenance costs. Street lighting assets have a high maintenance cost and energy expenditure; Essex County Council has budgeted £2,000,000 for 2018-19 on revenue maintenance and £3.9m on energy costs. Not only is this costly to Essex but it is unsustainable for the environment and street lighting contributes £150,000 pa on carbon taxes.

In partnership with Essex County Council we want to see people in Essex experience a high quality and sustainable environment which is why we introduce the LED pilot in 2015/16.

LED lights are more sustainable and offer better value for money, as outlined below:

- Reduces maintenance by over £200,000 pa or £4.6m over 20 years, due to the lamps having a longer design life.
- Better control over the brightness of light, so street lights can be dimmed depending upon the surroundings.

- The reduction in the cost of electricity to Essex County Council equates to £20m over 20 years.
- Lower consumption will reduce the carbon tax by £90,000 pa which is a 60% reduction. This equates to a saving of £1.8m over 20 years.

Therefore, building on the success of the LED pilot and phases 1 of the replacement programme, work will continue in the completion of phases 2 and 3 programme for our all-night lighting on priority routes (PR1 and PR2 county routes) with £9.0m investment. All the savings above will be realised once these programmes have been completed and all 38,000 conversions delivered. Other assets under street lighting include illuminated signs and underpasses. The illuminated signs on priority routes will be upgraded to LED and the lighting in underpasses will remain a priority.

There is now a national supply shortage of the low pressure sodium lamps (those which normally have an orange glow), and from June 2019 the supply of these lamps will no longer be available as production of these lamps is to end. This will create difficulties in maintaining the 60,000 street lights currently fitted and plans to address this issue are being developed.

127,000
lighting
columns

40,000
lighting
faults to be
repaired

11,500
new LED
lights





Traffic Management

Traffic lights, cameras and the Essex Traffic Control Centre

The Network and Safety function delivers the Network Management Duty of the Traffic Management Act supporting the safe and efficient movement of people and good around and through the county.

The Network Operations team is responsible for the real-time management of incidents and events, along with planning and agreeing the traffic management required for events.

The Essex Traffic Control Centre plays a key role in managing the road network, monitoring and intervening in incidents and broadcasting information to road users via many sources. Radio broadcasts and a Twitter feed with 40,000 followers are used to inform of travel issues and areas of congestion.

All newly installed bus enforcement cameras are now fully operational with 12 cameras enforcing 9 sites across the County and there were in excess of 70,000 penalty charge notices issued during 2017-18. Further investigation to make the reviewing and representation process more efficient is being undertaken with the possibility of purchasing additional software from Imperial to enable these efficiencies.

Intelligent Transport Systems includes the management of traffic signals and light controlled crossing, School Crossing Patrol Flashing Lights and the Management of Thurrock ITS Systems. The ITS renewals programme is to include the replacement of all obsolete junction controllers within the next 2 financial years, for completion by 31 March 2020.

The programme is to consider the removal of a number of crossings and junctions or the need to change to a more suitable facility e.g. zebra crossing.

In 2018-19, 10 sets of traffic signals will be replaced at a cost of £1.5m.

The award of new ITS maintenance contract due by December 2018 ready for commencement on 1st April 2019. The specification is currently being reviewed and is likely to include a 24/7 service.





Road Safety

To ensure people enjoy safe travel on our highways with the key aim to reduce 'Killed and Serious Injuries' (KSIs) towards the vision of zero deaths and serious injuries

Road safety is the sole purpose of the Safer Essex Roads Partnership (SERP) which comprises Essex County Council, Southend-on-Sea Borough Council, Thurrock Council, Essex Police, Essex Fire and Rescue Service, Highways England, Essex and Herts Air Ambulance Trust, East of England Ambulance Trust and Safer Roads Foundation.

Essex Highways provides SERP with the core secretariat, strategic data analysis, safety camera expertise and a considerable proportion of the outreach and campaign management. SERP's vision is to 'Reduce death and serious injury on Essex roads to zero'. Vision zero is an ambitious target which SERP cannot tackle alone: road users need to play their part in keeping themselves and everyone else safe. In the interim, SERP has a target to reduce death and serious injuries on Essex roads by 40 per cent by 2020.

SERP supports the 'Safe System Approach' to help achieve Essex County Council's target for casualty reduction and Vision Zero. The Safe System Approach states that life and health should not be comprised for mobility. SERP's partner members are encouraged to adopt the Safer System Approach to ensure that highway investment is made with safety as its highest priority.

Road safety and casualty reduction will be achieved through:

Safer Roads and Mobility:

SERP aims to raise inherent safety quality of the roads within the areas it covers for the benefit of all road users. It is proactively encouraging each local authority and/or its delivery partners to adopt the Safer System approach and work to the principles of ISO 39001 - Road Traffic Safety (RTS) Management Systems.

Safer Vehicles:

Encourage deployment of improved vehicle safety technologies for both active and passive safety. For this,

SERP needs to work closely with the DfT and support any campaigns.

Safer Road Users:

Develop intelligence led, effective programmes to improve road user behaviour with measurable outcomes. Work with other partnerships, authorities and organisations to improve compliance with rules, incentivise positive behaviour changes and equipment choice.

Post-crash response:

Improve post incident responsiveness to minimise the impact on casualties and the road user. SERP has funded an additional Rapid Response vehicle for the Essex & Herts Air Ambulance Trust (E&HAAT) to provide continuous emergency cover when the helicopter cannot fly.

Bikeability

Bikeability, which trained over 7000 children in the 2017-18 year, promotes safe cycling as a sustainable transport option. This year, courses continue to be offered to give adults both skills and confidence on the roads.

Safety Cameras

Essex Highways staff work in partnership with Essex Police in maintaining the 86 fixed site and 2 average speed safety cameras that are installed. We aim to use enforcement as a means to engage and educate as it is far more beneficial for a driver to learn from their mistakes and gain a greater awareness for safety on the roads, than simply pay a fine.

National Driver Retraining Courses (NDORS)

Essex is now the largest local authority deliverer of NDORS in the country, delivering 67,000 courses in 2017-18. Courses are delivered not only during daytime Monday to Friday but also during evenings, week-ends and even on Bank Holidays to meet customer demand.

Public Rights of Way (PRoW)

We manage and maintain 4000 miles of Public Rights of Way (footpaths, bridle ways and by-ways) throughout the County, providing unimpeded access for permitted users

The Public Rights of Way (PRoW) hierarchy will be established and embedded which will categorise each route in a degree of strategic importance. The inspections and works will then be aligned to the hierarchy as the basis of establishing a targeted approach across the PRoW network. This will be reflected in the Rights of Way Improvement Plan Review which will provide the PRoW business case for 2019/20 and beyond.

As a statutory document that needs to be updated every 10 years, the Review will also capture other initiatives, including the emerging Byway policy and also an updated version of the Developer and Public Rights of Way Guide (2010) which will afford greater protection for Public Rights of Way in the development process.

Public Path Orders (PPO) are required when it is necessary to create or divert paths as a result of road or drainage improvements, housing developments and following requests from landowners. The PPOs are published to advertise the changes and forms the public consultation to ensure that the views of all interested parties are considered before any changes are implemented.

Some parish councils wish to maintain sections of the network in their parish and this is managed through the Parish Path Partnership (P3). The Headland Management scheme is where landowners, across whole land the right of way passes, maintain these sections on behalf of Essex County Council. The PRoW team also manage the Essex Local Access Forum (ELAF) and undertake Land Searches connected with house sales and purchases.

The management of PRoW also includes responsibility maintaining the Definitive Map and Highway Records. These form the official record of the extent of highway ownership and any changes that have occurred over the years.

The inspection team ensure that the routes are accessible through regular walked surveys and take enforcement action when routes have been obstructed inadvertently or otherwise.

Capital schemes to be delivered in 2018-19 include

- Colchester Restricted Byway 243, asphalt resurface.
- Foxearth Footpath 2, Installation of recycled plastic board walk through nature reserve.

**Vegetation
to be cut on
1000 miles
of PRoW**

**124 projects
delivered with
Communities
and Volunteer
groups**

Seasonal

Aiming to keep roads, as far as reasonably practicable, free from ice, snow, floods and overgrown vegetation for the safe movement of the travelling public

Winter Service

The winter service period in Essex usually operates from late October to early-April. The routes that are salted are shown on the Essex County Council website. The salt spreading vehicles, known to the public as gritters, are fitted with snow ploughs when needed.

When freezing conditions are forecast on roads in Essex, the Highways Winter teams prepare to spread pre-wetted salt on a key network of just over 2000 miles of roads. We work in partnership with Essex County Council to make sure people in Essex live in safe communities by aiming to keep roads, as far as reasonably practicable, free from ice and snow for the safe and expedient movement of the travelling public.

Each gritter is equipped to deliver pre-wet salt which improves the effectiveness of the salt by spraying brine with the rock salt as it is spread. Less salt is used and 30% of what is spread is brine which contains 23% pure salt.

This provides enhanced performance as the brine helps the dry salt cling to the road surface and is a better de-icing agent due to the moisture content. This treatment saves Essex County Council approximately £150,000 per year compared to spreading dry salt only.

The 59 routes are designed to ensure that for a preventative salting treatment, each vehicle should take a maximum of 2.5 hours between leaving the depot to finishing its salting route. However, in times of severe weather, such as snowfall, then the crews will be reacting to varying conditions and their works pattern will be prioritised.

Roads treated with salt, help prevent the formation of frost and ice. During snow conditions, any significant build-up of snow, will require the removal of the snow from the road surface using the snow ploughs to help keep the roads as safe as possible.

During very cold weather, the effectiveness of salt melting snow, frost & ice on a road surface is reduced and hazards may still be present on treated surfaces. We ask drivers to expect road surface conditions to vary more than usual when Road Surface Temperatures (RST) start to fall below -6 deg C or during snow conditions.

Essex has ten weather stations located at strategic locations around the county and specialist road surface forecasts determine the weather and its likely effects across all parts of the county, to ensure so we use specialist road surface forecasts to determine varying weather across all the varying parts of the county, to ensure that salt is only spread on areas which require treating.



Salt network - 59 routes covering 2034 miles

14,500 tonnes of salt stock held

10 Weather stations

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Town Councils, Parish Councils and other organisations are invited to join a self-help scheme at the start of the winter season where we deliver 1 tonne of bagged salt to those who require it, under a scheme known as the Salt

Bag Partnership. This scheme also covers urban un-parished wards. All public authorities are very grateful to the many farmers who are prepared to plough local roads when required following snow fall. The provision and delivery of a winter service costs in the region of £1.6m to prepare and provide the resources required to be able to respond to the weather condition.

Over previous years the average cost of treating the network is £1.0m although this is very much dependent upon the weather. Some years the weather is mild while in others there can weeks of sub-zero temperatures and snow.



Verge Cutting

It is important for the safe use of roads by pedestrians, cyclists and drivers, that trees, shrubs and other plants growing on verges are kept cut back away from the road and to keep road signs clearly visible.

Essex Highways staff carry out the regular of roadside verges in four districts including a one-metre wide Spring safety cut in some areas, and a full width Autumn/Winter cut in priority areas. Local arrangements apply elsewhere.

On all our high speed roads we will carry out a safety cut in Spring and a full width cut in Autumn. In urban areas verges will be weed-treated in Spring and Autumn in all districts except Tendring as they deliver this service themselves.



Roads Drainage

Essex Highways has a clear plan for priority work to reduce preventable flooding incidents on our roads

The highways drainage assets include:

- Gullies - These help remove surface water due to rainfall/storm weather from the highway.
- Slotted and grilled drainage channel - More discrete types of gullies. Their purpose is the same, remove surface water.
- Catchpits - Empty chambers with an inlet pipe and an outlet pipe, which allow sediment to be removed from the flow of water.
- Manholes - Inspection chambers for maintenance work.

The aim is to maintain and improve the condition of the highway drainage assets so far as is reasonably practical and affordable, and delivering a flood free highway to ensure a safer network for road users in Essex. There are nearly 250,000 gullies on our road network, as well as thousands of “catch pits” and drainage channels – a massive task to clean all gullies and one that is not possible to achieve even with a budget of £1.3m and five crews dedicated to this work all year.

The available funding is sufficient for the cleansing of all 93,000 gullies on the strategic PR1 and PR2 county routes, at least once over a 12 month cycle together with 20,000 gullies on other high risk areas on local roads. However, the cleansing crews are still available to react to flooding incidents. These incidents are often

unpredictable and the responses are prioritised based upon the threat to life and property such as Accident sites, High speed roads, winter salting routes.

Management of drainage systems is to be further strengthened by utilising the link between the cyclical highway drainage cleansing strategy and Essex County Council’s Flood Management identified sites. The electronic information on all the drains on our highways is being improved bringing the historic records up to date. Correlating data from incidents and inspections helps devise a more intelligent approach to maintenance.

Surface Water Alleviation Schemes (SWAS) are projects to improve highways drainage systems. For example, this could involve the replacement of pipes or implementing new gullies. The asset management team rank proposed SWAS schemes based on a risk assessment, to create a programme of works and the high priority SWAS schemes will be delivered through capital funding in 2018/19.

The extensive network of watercourses, commonly called ditches, form an important part of flood risk management. As more intense and heavy rainfall events are experienced, the significance of maintaining the capacity of these local drainage systems has never been greater.



113,000
gullies
to be
cleaned

25 SWAS
schemes
to be
delivered

Social Value

In the public sector, social value can be a useful way of thinking about how to allocate limited resources - and how collective benefit can be realised for the community



For example, for every £1 spent on service delivery of services, can that £1 be used to produce a wider positive benefit to the community? a local authority awarding a contract to build a new school, may ask the provider to include:

- Careers training / Advice
- Education pathways
- Routes to employment.

This helps the authority meet wider objectives beyond the delivery of a new building and derive more value from its investment, making public money go further.

As responsible guardians of public money, Essex Highways is committed to adding value wherever and however it can. We have Social Value Champions in this contract, their focus being on how we can extract the most value for money for our customer and best benefit the communities in which we operate.

We're look at doing this in every aspect of service delivery, including:

- Accreditation to BS ISO Standards
- Awards
- Carbon Footprint / Energy / Utilities Saving / Recycling / HSEQ
- Charity
- Diversity and Inclusion
- Engagement with Stakeholders & SCP on CSR/ Social Value activity
- Partnerships
- Public Engagement
- Safety / Wellbeing
- School / STEM Ambassadors
- Succession Planning / Skills
- Volunteering
- Forces recruitment scheme which would sit alongside our apprentice and social care pathways initiatives.

Talent Development

We're constantly working to attract the diversity of talent that is required to futureproof the long term delivery of vital services such as highways and transportation.

Apprentices and Graduates

The Ringway Jacobs Academy covers all of the skills required to fulfil contract delivery and there has been investment in building partnerships with colleges and academies, developing coursework, which gives our apprentices the start they need as employees.

Following the successful completion of their training, all of our apprentices and graduates are offered a full time contract to remain within the company. This approach allows us to invest in the regions we serve and put something valuable back into the society we live in.

There are 25 school leaver apprentices currently employed within Essex Highways who are at varying stages in their training and are employed in the following work areas.

- Civil Engineering - 12
- Business Administration - 4
- Customer Service - 4

- Data Analysis - 1
- Highway Maintenance - 3
- Public Relations - 1

The Government has introduced new Management Apprenticeship Standards which have been created by employers for employees. Historically, apprenticeships have been focused on getting school leavers into entry level technical roles. This perception has now changed and the new reality is that Management Apprenticeships have radically changed the way that management training is delivered and funded.

Management Apprenticeships benefit both employers and individuals and they help to improve organisational effectiveness by increasing the skills of the workforce. These new standards are delivered via a structured, work-based training programmes which are assessed against the requirements outlined in the Standards.



Potential savings of £500,000 per year



Apprentices will benefit by;

- Improving their management and leadership skills. Apprentices will boost their leadership confidence and competence through gaining an extensive toolkit of practical techniques and skills that will increase their effectiveness and professionalism within the organisation.
- Gain professional recognition. The new Apprenticeship Standards are industry recognised and provide a quality stamp of management competence.
- Develop transferrable skills. On achieving the professional qualification, the individual will emerge as a highly competent manager who will find opens doors to career progression and new development opportunities.

Management Leadership Programme

This is our main 'in catalogue' offering for career development; it was launched last year in conjunction with the introduction of the apprenticeship levy. At all levels, competencies required by the standards fall in to three main categories:

- Personal effectiveness
- Interpersonal Excellence
- Organisational Performance

All levels also include three modules delivered in-house by functional leads:

- Managing Safety
- Managing People
- Managing our Business

Additionally we offer an in-house Supervisory Skills courses consisting of 6 modules; two groups have already completed and we are enrolling for the fourth. There are currently 15 employees enrolled on these courses which last for 6 months after which the employees are provided with a certificate.

As well as Apprenticeships and Graduate Schemes, we're also looking at routes to employment for harder to reach social groups and ex-armed forces personnel.

Social Care Pathway

Young people with additional needs and those in social care require more council funding than older generations. Routes into employment have been developed for these individuals.

Open days are held for individuals and their care worker to demonstrate the working environment, job role and team. Interviews are adapted to let us understand the person, their background, routines, travel plans to work and how we can help their transition into work. All of those recruited so far through the social care pathway pilot scheme have taken on operative roles.

The scheme is to be expanded in future to include office-based roles. In Essex, the scheme could realise savings in the region of £0.5m per year.

Armed Forces Covenant

Ringway Jacobs signed up to the Armed Forces Covenant in November 2017 and there are plans to create an armed forces recruitment scheme which would sit alongside our apprentice and social care pathways initiatives.

Service personnel have a great deal to offer the highway industry once their term in the forces comes to an end. However, there is no way of hiding the enormity of the changes for each individual when they start seeking work in the civilian environment. Therefore they all require assistance to make this transition.

Plans are being developed by RJ to offer guidance to service personnel who are planning to leave the forces with a view to offer guidance on what skills and training would be an advantage should they wish to secure employment in this industry. This would then be followed up with a recruitment programme for suitable candidates.



Essex Highways

A graphic element consisting of three white, curved, parallel lines that sweep from the left towards the right, positioned behind the text 'Highways'.