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PUBLIC

To: Members of Cabinet Member meeting - Highways, Transport and Infrastructure

Tuesday 14 January 2020

Dear Councillor,

Please attend a meeting of the **Cabinet Member meeting - Highways, Transport and Infrastructure** to be held at **10.00 am** on **Thursday, 23 January 2020** in Committee Room 3, County Hall, Matlock, DE4 3AG, the agenda for which is set out below.

Yours faithfully,

Simon Hobbs
Director of Legal and Democratic Services

A G E N D A

PART I - NON-EXEMPT ITEMS

1. Declarations of Interest

   To receive declarations of interest (if any)

2. To receive Petitions (Pages 1 - 2)

3. Minutes (Pages 3 - 8)

   To confirm the non-exempt minutes of the meeting of the Cabinet Member

– Highways, Transport and Infrastructure held on 21 November 2019

To consider the non-exempt reports of the Executive Director for Economy, Transport and Environment on:

4 (a) Petition - High Street, Apperknowle - Request for the Installation of a Footway and Bus Stop Hardstanding (Pages 9 - 12)

4 (b) Petition - Nethermoor Lane, Killamarsh - Concerns regarding Highway Safety (Pages 13 - 16)

4 (c) Petition - Stafford Close, Smalley - Parking Issues (Pages 17 - 24)

4 (d) Meeting the Requirements of the Code of Practice for Well-Managed Highway Infrastructure - Approval of Technical Policy Documents (Pages 25 - 232)

4 (e) Statement of Common Grounds Nottinghamshire County Council (Pages 233 - 238)

4 (f) Review of Charges for Commercial Waste (Pages 239 - 242)

4 (g) To Note the Urgent Decision taken by the Executive Director - Economy, Transport and Environment to Accept the Rural Development Programme for England Grant Award (Pages 243 - 246)

5. To consider the non-exempt Joint Report of the Executive Director - Economy, Transport and Environment and the Director of Finance and ICT on Budget Monitoring 2019-20 - Period 7 (Pages 247 - 252)

Agenda Item No. 2
PUBLIC

DERBYSHIRE COUNTY COUNCIL

CABINET MEMBER MEETING – HIGHWAYS, TRANSPORT AND INFRASTRUCTURE

23 JANUARY 2020

Report of the Director of Legal and Democratic Services

REPORT ON PETITIONS TO BE RECEIVED

1. Purpose of the Report To receive petitions forwarded to the County Council relating to matters contained within the portfolio of the Cabinet Member for Highways, Transport and Infrastructure.

2. Information and Analysis In compliance with the Council's Petition Scheme, the following petitions are presented for receipt, investigation and formal response by the Executive Director – Economy, Transport and Environment:-

LOCATION/SUBJECT	SIGNATURES	LOCAL MEMBER
Calver, Grindleford Road - Request for Reduction in the Speed Limit	42	Councillor J Atkin

3. Considerations (to be specified individually where appropriate)
In preparing this report the relevance of the following factors has been considered: financial, legal, prevention of crime and disorder, equality and diversity, human resources, environmental, health, social values, property and transport considerations.

4. Key Decision No

5. Call-in Is it required that call-in be waived in respect of the decisions proposed in the report? No

6. Background Papers
Petition held on file 124.0 in Democratic Services.

7. OFFICER'S RECOMMENDATION

(1) that the petition listed above be received and noted; and

(2) that the Executive Director – Economy, Transport and Environment be asked to investigate and consider the matters raised.

Simon Hobbs
Director of Legal and Democratic Services

MINUTES of a meeting of the **CABINET MEMBER FOR HIGHWAYS, TRANSPORT AND INFRASTRUCTURE** held at County Hall, Matlock on 21 November 2019

PRESENT

Cabinet Member - Councillor S A Spencer

Also in attendance – Councillors T Ainsworth and G Hickton.

In accordance with Standing Orders, Councillor I Ratcliffe attended the meeting as local Member in respect of Minute No. 57/19.

57/19 PETITIONS The Cabinet Member invited Councillor Irene Ratcliffe, Local County Councillor covering Wirksworth, to address the meeting. Councillor Ratcliffe detailed the contents of the petition and requests for an extension of the 30mph speed limit at the southern access to Wirksworth, the lack of pavements and bus shelters. It was noted that there was a formal process for requesting bus shelters and in respect of extensions to speed limits these had to be considered in line with Department of Transport guidance.

RESOLVED (1) to receive the under-mentioned petition:-

Location/Subject	Signatures	Local Member
Wirksworth – Request for Signage and Safety Improvements at the Southern Approach	209	Councillor I Ratcliffe
Breaston, Firfield Avenue – Request for Parking Restrictions	19	Councillor R Parkinson

(2) that the Executive Director – Economy, Transport and Environment investigates and considers the matters raised in the petition.

58/19 MINUTES RESOLVED that the Minutes of the meeting of the Cabinet Member for Highways, Transport and Infrastructure held on 10 October 2019 be confirmed as a correct record and signed by the Cabinet Member.

59/19 PETITION: ECKINGTON - REQUEST FOR TRAFFIC CALMING AND SAFETY MEASURES ON MAIN ROAD BETWEEN MARSH LANE AND ECKINGTON SCHOOL Following receipt of a petition requesting traffic

calming and safety measures on Main Road between Marsh Lane and Eckington School, Eckington, investigations have been undertaken.

The B6056 Main Road has a very good accident history and good compliance with the speed limit, which was likely to be as a result of the three fixed speed cameras along the route, gateway treatments, school signing and the controlled crossings outside each school.

The County Council receives daily requests for traffic calming and to ensure these were treated on a consistent basis, a speed management protocol has been developed. Due to the very good collision history for Main Road, the Council would not be providing any additional traffic features.

It was recognised that crossing the road to complete the route from Marsh Lane to Eckington was not desirable but proposals would not meet the required criteria, however it was suggested that additional warning signing, either side of the crossing area, to highlight that pedestrians would be present, could be provided. Completing the footway continually down one side has been investigated, however the Council was only receiving funding for a limited number of highway schemes and the construction of a footway at this location remained a consideration for the future.

Members of the public have expressed concern in respect of parking in and around the school and it has been agreed to investigate the possibility of providing short sections of double yellow lines around the junctions of Main Road with School Lane and Lightwood Road. Any proposals would be added to a list of similar schemes which would be pursued at a later date.

RESOLVED that (1) the request for traffic calming and reduction in the speed limit on Main Road between Marsh Lane and Eckington School be refused but notes that the request for the footway has been added to a desire list for funding in the future;

(2) the erection of two 'pedestrians crossing' warning signs be approved and the Traffic Regulation Order proposal be added to the current waiting list; and

(3) The Local Member, objectors and Head Teacher of Marsh Lane Primary School be advised of the decision.

60/19 PETITION – HORNS BRIDGE ROUNDABOUT, CHESTERFIELD CONCERNS REGARDING HIGHWAY SAFETY Investigations have been undertaken following receipt of a petition requesting safety concerns and suggested improvements to highway signing at Horns Bridge roundabout, Chesterfield.

The Horns Bridge roundabout was a busy signalised roundabout which served as the gateway to Chesterfield from the M1 Motorway, connecting the A61 with the A617 to the east of the town centre.

Whilst it was felt that the current destination signage and lane markings were

adequate to allow a motorist to select the correct lane and negotiate the roundabout, additional place name information on the advanced direction signs on the A61 southbound and A617 westbound approaches would be helpful in allowing a motorist to make an earlier decision over which was the correct lane to select prior to entering the roundabout.

The collision history over the three year period between 1 June 2016 and 31 May 2019 showed that there have been nine collisions, all with a slight severity. Given that approximately 75,000 vehicles used the roundabout on a daily basis, this was considered to be a good collision record when compared with similar junction layouts with similar usage in other parts of the country.

RESOLVED that (1) the existing capital budget will be used to fund improvements to the advanced direction signage on both the A617 westbound and the A61 southbound approaches to the Horns Bridge roundabout, Chesterfield; and

(2) The Local Member and lead petitioner be advised of the decision.

61/19 HIGHWAYS DEVELOPMENT CONTROL - STANDING TECHNICAL ADVICE FOR SMALLER PLANNING APPLICATIONS In its role as Highway Authority, the County Council was a Statutory Consultee to the 10 local planning authorities in Derbyshire (8 borough and district councils, the Peak District National Park Authority and the County Council as Mineral and Waste Planning Authority) and for the determination of the County Council's own applications.

Each year, the Highway Authority was consulted in connection with approximately 8,000 planning applications and the County Council had 21 calendar days to make a substantive response. In order to help address the tension between increasing application numbers, limited/ reducing staff resources in the Highway Authority and increased time required to process applications, it was proposed to introduce a Standing Advice document for use by planning officers at the local planning authorities. This would provide straightforward, technical guidance to allow the planning officers to carry out the necessary assessment of smaller applications without having to consult the Highway Authority.

It was proposed that the move to Standing Advice would be supported by a programme of guidance and training delivered by the Highway Authority to the local planning authority in advance of the Standing Advice being introduced. It was also proposed that the Highway Authority were contentious or the planning officers were in doubt as to whether the standard criteria could be met.

RESOLVED (1) to approve the publication of the Standing Advice for use by the local planning authorities within Derbyshire as proposed in the report; and

(2) that a programme of guidance and training be offered to all local planning authorities in Derbyshire to minimise risk and ensure the most effective implementation of the Standing Advice.

62/19 HIGHWAYS DEVELOPMENT CONTROL - STANDING TECHNICAL ADVICE FOR HGV OPERATORS LICENCES The County Council as Highway Authority, was a consultee to the Driver and Vehicle Licencing Authority (DVLA) when it received applications by goods vehicle operators to operate from new premises or extend the scale of existing operating centres.

The Council has been consulted in connection with between 100 and 150 license applications each year. However, the Driver and Vehicle Standards Agency's method of consultation placed extremely onerous resource implications upon the Highway Authority in dealing with these applications. The Council has, recently, reluctantly based its handling of these licenses on the available resource and outcome limitations, and currently only responded to those proposals which received complaints or notifications via the planning system. In an effort to address and manage the situation more meaningfully, it was proposed to publish a Standing Advice note which would be provided to the DVLA to allow its own officers to make a proper assessment of the operating centre.

RESOLVED to approve the adoption and publication of the Standing Advice in connection with Heavy Goods Vehicle Operators' licence applications attached to the report.

63/19 FUNDING OF THE DIGITAL DERBYSHIRE TEAM AND FUTURE DELIVERY OF DIGITAL INFRASTRUCTURE In 2013, the Council entered into a contract with BT to facilitate the delivery of superfast fibre broadband throughout the County and the Digital Derbyshire broadband programme was established to manage delivery throughout Derbyshire.

Digital Derbyshire has delivered faster broadband to over 103,000 premises, of which over 97,000 have access to superfast (in excess of 24Mbps) broadband. The current deployment phase was due to continue until December 2020, by which time it was anticipated that over 112,000 premises would have access to faster broadband and of which, over 104,000 premises would have access to superfast broadband. The current take–up of fibre services was approximately 56% and was expected to increase.

Government and BT have built a reward mechanism into the delivery programme and performance targets (gainshare/clawback mechanism) which essentially returns a level of investment back into the local pot based on achievement of take-up above 30% and the current level of expected gainshare was appended to the report. The reward from increasing the level of take-up, and subsequent gainshare/clawback amount, was considerable and resourcing the Digital Derbyshire team should, therefore, be viewed as more than a managing body but also as an invest to save initiative.

The contract with BT did not allow the Council to capitalise associated revenue costs such as salaries against the programme. The Council has been required to allocate revenue funding from other salary budgets in Economic Development to cover delivery of the Digital Derbyshire programme up to 31 March 2021. Although this

arrangement was considered appropriate at the time, the continued extension and expansion of the programme by Government has placed great revenue (salary) strain on the service. It was therefore proposed to fund the Team by the use of General Reserve for the four years from 1 April 2021 until 31 March 2025. Reimbursement of staff salary costs would be returned to General Reserves through the gainshare mechanism as described in the report. Therefore, the Revenue budget could be reduced by £150,000 in accordance with the five year savings plan.

RESOLVED to (1) note the importance the Council plays in enabling the delivery of an effective digital infrastructure through the Digital Derbyshire in delivering Council Plan priorities; and

(2) approve the funding for the Digital Derbyshire Team of £150,000 per annum from the General Reserve for the four years from1 April 2021 until 31 March 2025.

64/19 **BUDGET MONITORING 2019-20 – PERIOD 5** The net controllable budget for the Highways, Transport and Infrastructure portfolio was £77.316m. The Revenue Budget Monitoring Statement, prepared at Period 5, indicated that there was a projected year-end overspend of £1.151m. This overspend would be supported by the use of £2.000m from the Budget Management earmarked reserves. After the use of this reserve, the forecast was an underspend of £0.849m.

The key variances included Waste Management (underspend £1.319m), Highway Maintenance (underspend £1.489m), Winter Maintenance (overspend £1.777m) and Planning and Development (underspend £2.186m).

Budget reductions totalling £2.609m were allocated for the year, with a brought forward figure from previous years of £3.321m. This has resulted in total reductions to be achieved of £5.930m at the start of the year. The short fall between the target savings figure and the savings identifies for 2019-20 was £5.250m.

Growth items and one-off funding in the 2019-20 budget included Waste Treatment and Disposal (£1.500m ongoing), Highways Maintenance (£1.000m one-off), Public Transport (£0.500m ongoing), Water Body (£0.100m one-off), HS2 Co-ordination Officer (£0.064m one-off) and Street Lighting (£0.048m one off).

Earmarked reserves relating to this portfolio, totalling £16.851m, were currently held to support future expenditure. Risks and the debt position were also detailed in the report.

RESOLVED to note the report.

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Agenda Item No.4(a)

DERBYSHIRE COUNTY COUNCIL

MEETING OF THE CABINET MEMBER – HIGHWAYS, TRANSPORT AND INFRASTRUCTURE

23 January 2020

Report of the Executive Director – Economy, Transport and Environment

PETITION – HIGH STREET, APPERKNOWLE - REQUEST FOR THE INSTALLATION OF A FOOTWAY AND BUS STOP HARDSTANDING

(1) **Purpose of Report** To update the Cabinet Member of investigations subsequent to a petition requesting the installation of a surfaced footway and a bus stop hardstanding on High Street, Apperknowle, and to advise on recommendations.

(2) **Information and Analysis**

Background

At the meeting on 19 June 2019, the Cabinet Member acknowledged receipt of a petition containing 394 signatures requesting that a surfaced footway and a bus stop hardstanding be provided on High Street, Apperknowle (Minute No. 35/19 refers). A plan detailing the site is attached.

Officer Comment

Apperknowle is a village between the towns of Dronfield, Coal Aston, Eckington and Chesterfield. High Street is a classified road which forms a link from the residential area of Apperknowle to a local public house and a bus stop. The bus stop is situated in a location that serves the public house and a nearby cricket ground. The speed limit of the road from the village is 30mph up to the public house, at which point it changes to the national speed limit. The width of the carriageway varies between 5.7m and 6.1m and has an existing footway over part of its length on its north-eastern side and a system of street lighting is present over this length of the footway. There is no footway for approximately 60m of the road leading to the public house and bus stop. A further street light is located opposite the public house.

Connecting the public house to existing pedestrian facilities in Apperknowle could be best achieved by providing a new footway on the south-west side of High Street which would start at New Road and finish opposite Moor Top Road approximately 20m past the bus stop. The length of the new footway would be approximately 145m. It is noted that there is also evidence of a

trodden path over the length of the existing grass verge. An extension to the existing footway on the north-east side, whilst meaning the construction of a much shorter length of footway, would be unachievable without the acquisition of land and, therefore, a footway on the south-west side of High Street would be the only viable option.

Following the receipt of the petition, the Council commissioned a survey of both the pedestrian usage of the link between Apperknowle and the public house and the vehicular usage on High Street. The pedestrian count survey was taken between Thursday 11 July to Saturday 13 July 2019 inclusive, with the vehicle count and speed survey taking place over a six day period between 11 July to 17 July 2019.This has demonstrated extremely low flows of pedestrians and vehicles using High Street, together with an 85th percentile vehicle speed of 26mph. The 85th percentile speed defines the speed that 85 percent of drivers will drive at or below under free-flowing conditions. According to the Council's reported injury collision database, there have been no incidents on High Street at the location of the requested footpath in the last 15 year period. The Council's collision data is current up to 31 June 2019.

The estimated cost of such an improvement that includes kerbing and a system of drainage would be in excess of £50,000. Due to the significant funding required, any improvement must be weighed against other Council priorities. At this time, funds are concentrated upon the maintenance of existing infrastructure or road safety improvements to address recorded casualties. It is therefore difficult to give priority to an accessibility improvement, such as this, unless there are other funding opportunities available.

Bearing the above in mind, even though it is a low priority, it is recommended that the request be added to the future schemes list to attract funding either through future development or through the Local Transport Plan Capital Schemes.

Local Member Comment
Councillor Alex Dale was consulted and had the following comment to make:

"*I am strongly in support of the petitioners' request for a pedestrian footway to provide a better and safer link between the public house and the rest of the village. The Traveller's Rest is a popular pub both among Apperknowle residents and the wider community. Presently, the lack of a footway means that most pedestrian visitors have to walk along the southern verge and then cross over the road to access the pub. The verge is extremely bumpy and often adjacent to large puddles during periods of wet weather. I therefore believe that the existing situation poses a significant hazard to pedestrians trying to access the pub, and in particular I'm concerned about their safety when travelling back home on an evening, when the lighting is poor.*

Apperknowle is home to a significant elderly population and the only other pub in the village (Barrack Hotel) recently closed, meaning that the Traveller's Rest is the last remaining public house in the village. We know that public houses are often meeting places and can help to alleviate the problems of social isolation within communities. I am concerned that the perceived lack of a "safe passage" to the Traveller's Rest is deterring some older residents from visiting and therefore further exacerbating the problems of social isolation."

(3) **Financial Considerations** There are no financial considerations associated with this report.

Other Considerations

In preparing this report the relevance of the following factors has been considered: legal, prevention of crime and disorder, equality and diversity, human resources, environmental, health, property, social value and transport considerations.

(4) **Key Decision** No

(5) **Call-In** Is it required that call-in be waived in respect of the decisions proposed in the report? No

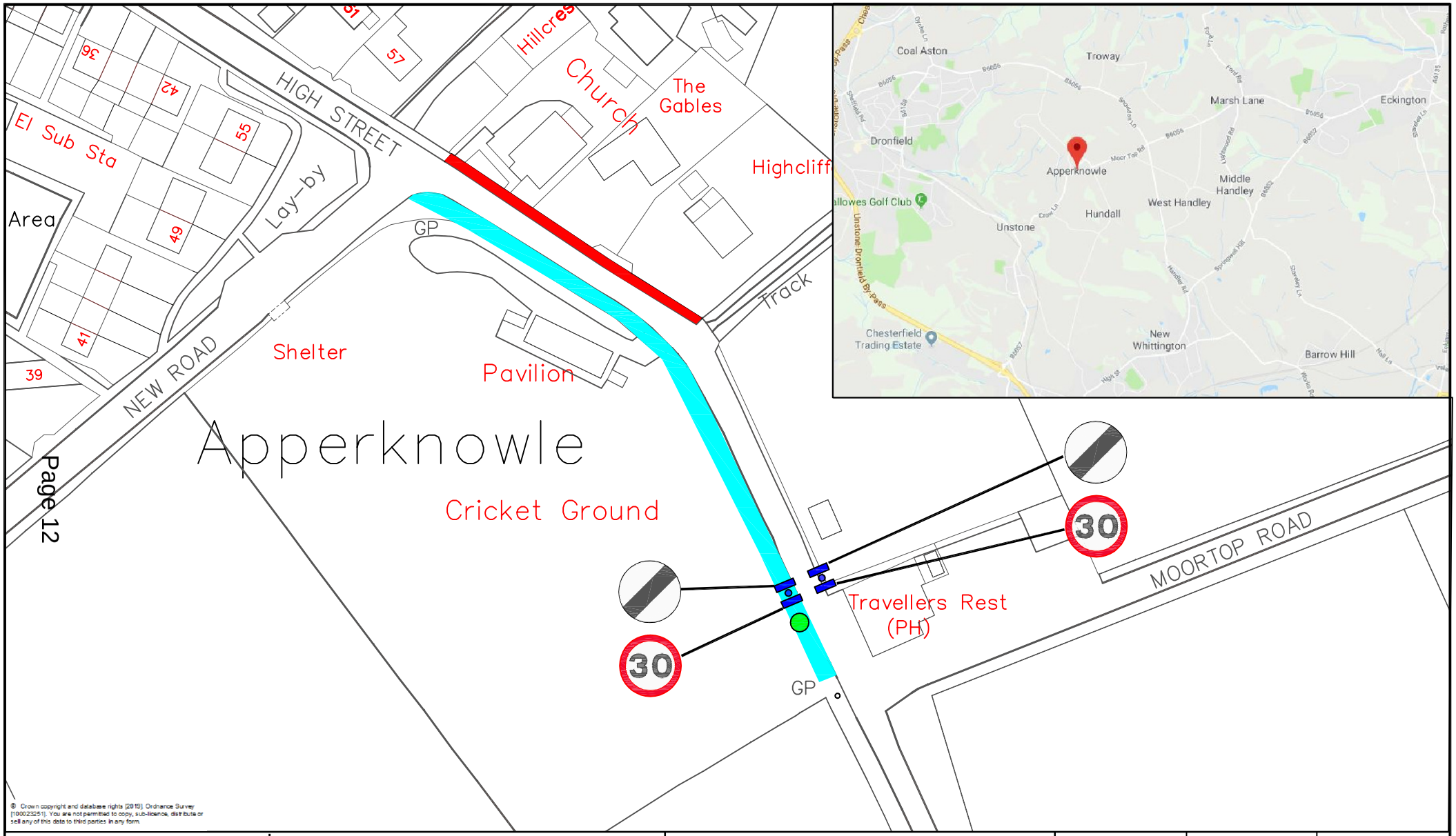
(6) **Background Papers** Held on file within the Economy, Transport and Environment Department.

(7) **OFFICER'S RECOMMENDATIONS** That:

7.1 The request for the provision of a footway and a bus stop hardstanding on High Street, Apperknowle be added to the future schemes list with the view to attracting funding sometime in the future; and

7.2 The Local Member and lead petitioner be informed accordingly.

Mike Ashworth
Executive Director – Economy, Transport and Enviroment



DERBYSHIRE County Council

MIKE ASHWORTH
Strategic Director
Economy, Transport and Environment

- EXISTING FOOTWAY
- REQUESTED LOCATION OF NEW FOOTWAY
- EXISTING SPEED LIMIT SIGNS
- EXISTING BUS STOP

PROJECT TITLE: HIGH STREET, APPERKNOWLE	DRAWN: PHIL_BRAISBY	CHECKED: STEVE_DUNGWORTH	APPROVED: STEVE_DUNGWORTH
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Agenda Item No. 4(b)

DERBYSHIRE COUNTY COUNCIL

MEETING OF CABINET MEMBER – HIGHWAYS, TRANSPORT AND INFRASTRUCTURE

23 January 2020

Report of the Executive Director – Economy, Transport and Environment

PETITION – NETHERMOOR LANE, KILLAMARSH - CONCERNS REGARDING HIGHWAY SAFETY

(1) **Purpose of Report** To inform the Cabinet Member of investigations undertaken following receipt of a petition concerning safety at a bend located towards on Nethermoor Lane in Killamarsh. A report was previously produced for a similar visibility issue on Nethermoor Lane but, owing to miscommunication, the wrong bend was investigated.

(2) **Information and Analysis**

Background

At the meeting on 18 April 2019, the Cabinet Member acknowledged receipt of a petition (Minute No. 16/19 refers). It contained 45 signatures requesting that both visibility and road safety improvements are carried out at a bend on Nethermoor Lane. A plan detailing the site as attached as an appendix.

Officer Comment

Nethermoor Lane is a residential cul-de-sac situated off the B6058 Sheffield Road in Killamarsh. The housing has been constructed in different phases over the years, which has led to Nethermoor Lane being extended in length with the resulting carriageway width varying from 11 metres (m) close to its junction with Sheffield Road, down to approximately 4.7m to 6m at the bend where the safety concerns have been expressed.

The petitioners, however, feel that the bend in the road causes an issue as an area of planting within the boundary of a private dwelling reduces the forward visibility when travelling around the bend. The bend in question is within a residential area with a 30mph speed limit and vehicles travelling around this bend should proceed with caution at a sensible speed. It is acknowledged that all the planting on either side of the road should stay within the confines of each property boundary and that it should not encroach onto the adopted highway. The County Council's collision database demonstrates a very good safety record on Nethermoor Lane and a recent survey of vehicle speeds at

the location of the bend show an 85% speed of 20mph. The 85th percentile speed is defined as, "*the speed at or below which 85 percent of all vehicles are observed to travel under free-flowing conditions past a monitored point*." It cannot, therefore, be recommended that safety measures be introduced at this site. However, at sites such as this one, with good collision records, and where there are occasionally vehicles that exceed the speed limit, a community speed watch initiative can be an effective way of combating drivers who fail to drive to the residential conditions.

Local Members Comments
Councillor Diane Charles and Councillor Brian Ridgeway were consulted and had no comments to make.

(3) **Financial Considerations** There are no financial considerations associated with this report.

Other Considerations

In preparing this report the relevance of the following factors has been considered: legal, prevention of crime and disorder, equality and diversity, human resources, environmental, health, property, social value and transport considerations.

(4) **Key Decision** No.

(5) **Call-In** Is it required that call-in be waived in respect of the decisions proposed in the report? No.

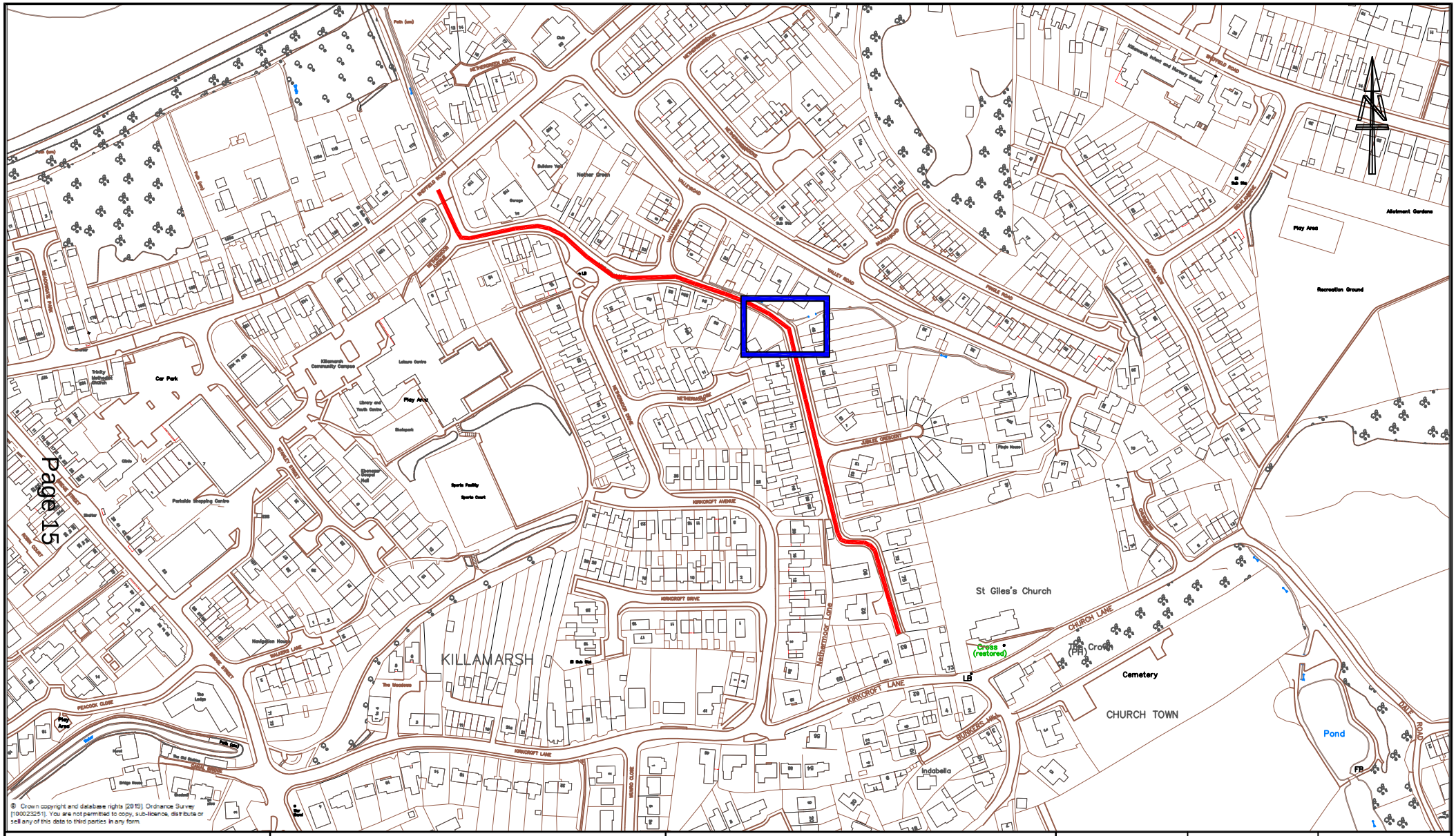
(6) **Background Papers** Held on file within the Economy, Transport and Environment Department.

(7) **OFFICER'S RECOMMENDATIONS** That:

7.1 Derbyshire County Council's Maintenance Team continues to inspects the private planting on Nethermoor Lane, Killamarsh as part of routine inspections, to ensure there is no encroachment onto the adopted highway; and

7.2 The Local Member and lead petitioner be informed accordingly.

Mike Ashworth
Executive Director – Economy, Transport and Environment



DERBYSHIRE County Council

MIKE ASHWORTH
Strategic Director
Economy, Transport and Environment

KEY:

EXTENTS OF NETHERMOOR LANE

LOCATION OF THE BEND IN QUESTION

PROJECT TITLE: NETHERMOOR LANE, KILLAMARSH	DRAWN: PHIL_BRAISBY	CHECKED: STEVE_DUNGWORTH
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APPROVED
STEVE_DUNGWORTH
Date: 02/09/19

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Agenda Item No. 4(c)

DERBYSHIRE COUNTY COUNCIL

MEETING OF CABINET MEMBER – HIGHWAYS, TRANSPORT AND INFRASTRUCTURE

23 January 2020

Report of the Executive Director – Economy, Transport and Environment

PETITION - STAFFORD CLOSE, SMALLEY – PARKING ISSUES

(1) **Purpose of Report** To inform the Cabinet Member of investigations undertaken following receipt of a petition requesting measures to stop vehicles parking on Stafford Close, Smalley, and to recommend that no further action be taken.

(2) **Information and Analysis** At the meeting on 19 September 2018, the Cabinet Member acknowledged receipt of a 16-signature petition, requesting measures to restrict parking on Stafford Close other than for the residents and their visitors (Minute No. 81/18 refers).

A summary of the petition is:
"We are writing to you in the matter of the above mentioned issue which is causing great concern and problems to the residents of Stafford Close".

Background

Stafford Close is a small complex of sheltered housing, which consists of bungalows and apartments for people over 60 years old. The housing has limited parking facilities for both residents, family members and medical professionals in attendance.

Stafford Close is located off the A608 Main Road, opposite the junction with the A609 Dobholes Lane in Smalley. This busy road junction caters for traffic travelling between Heanor, Belper and Derby. The Richardson Endowed Primary School is located approximately 100m south of Stafford Close on the Main Road. There is also a Nursery School located at the rear of the main building which access can be gained from Kerry Drive. There is also a pedestrian right of way that links Main Road to Kerry Drive that runs through Stafford Close. (See Appendix 1).

The residents have therefore requested that a large notice be erected at the entrance of the Close, stating that parking is for residents and their visitors only, and that this is then monitored by all parties involved.

The petitioners' letter has also been the sent to the Richardson Endowed Primary School, Amber Valley Borough Council and Futures Housing Group.

The petitioners state that they want to ensure that the residents and their visitors can park their cars safely and in close proximity to their homes without any form of abuse or harassment from motorists that is alleged to occur at present.

Within the covering letter for the petition, it is alleged by the residents that vehicles parked on the Close are also owned by some of the residents of Derby Road and by employees of the local garage.

Officer Comment
Parking in residential areas can be the source of much local concern, particularly with regard to impeded access. However, it is rarely practicable to pursue parking controls in such circumstances. For instance, yellow lines apply equally to all drivers and are often deemed overly restrictive to the residents themselves and their visitors.

One element of the residents' frustrations is the absence of a former sign that was in situ on the Close, which stated that parking in the area was for residents only. This sign has subsequently gone missing. Unfortunately, the County Council does not have a record of this sign and it would not have been something which the County Council would have installed as the sign is not a permitted one contained within the Traffic Signs Regulations and General Directions 2016. All signs used on the public highway must conform to these regulations. As the entire length of Stafford Close is adopted public highway, the County Council does not have the authority to provide a sign that states that parking is only permitted for certain members of the public.

The main focus of the petition is the consistent use of the Close for parking by parents of the children attending the nearby Richardson Endowed Smalley Primary School. The parking at school arrival and dispersal times has generated a growing resentment and verbal exchanges between both parents and the residents, which has resulted in abusive and threatening behaviour. Concerns have also been expressed that access for the Emergency Services might be obstructed.

Whilst the County Council can appreciate the residents frustrations with regard to the parking, it is important to note that all members of the public have equal rights over the public highway, and if a vehicle has valid tax, insurance and MOT, and is parked in accordance with the Highway Code, no offence is being committed.

With regard to parking in general, it is generally accepted that car ownership has, in many cases, outstripped the capacity of the existing infrastructure to accommodate parking. It is not strictly a duty or a responsibility of the County Council to provide an individual with parking.

Parking of this nature is a common occurrence on residential roads next to schools and a case could be argued for parking restrictions at many locations

such as junctions, corners and turning heads. In actual fact, there are already laws in place that can be applied to address such matters. Rule 242 of the Highway Code states "*You MUST NOT leave your vehicle or trailer in a dangerous position or where it causes any unnecessary obstruction of the road.*" The laws which apply in that case are the Road Traffic Act 1988 (Section 22) and The Road Vehicles (Construction and Use) Regulations 1986 – Regulation 103. Section 137 of the Highways Act 1980 makes it an offence to wilfully obstruct the free passage along a highway.

The Police are responsible for enforcing such moving traffic offences and it may therefore be appropriate for the residents concerned to contact the Police via their Local Safer Neighbourhood Team.

With regards to residents' parking schemes, there are a number of conditions that prospective sites should meet before a residents' parking scheme can be considered. One of the main requirements is that the scheme should cover a self-contained residential area. There is the danger that promoting residents' parking schemes on isolated streets will only transfer the problems from competition for parking onto adjacent streets. In such instances where such schemes are appropriate, an area-wide approach is adopted. Typically, such schemes are best suited to the outskirts of large town centres where alternative parking is available in the form of car parks.

Any residents' parking scheme also has to be self-financing to the County Council and the majority of residents must be supportive of the proposals for the scheme to be successful. Currently, the costs of annual parking permits are £35 for the first vehicle and £50 for any additional vehicles. A single visitor permit is also available per household and this is charged at £13 per year. Sufficient revenue needs to be generated to cover the management and enforcement necessary for a scheme to work. It should also be noted that such a scheme does not guarantee permit holders a parking space.

In this case, it is likely that the displaced parental parking associated with the school could migrate onto St John's Road and Kerry Drive, which are located off Main Road, both of which have access to off-street parking. It is therefore likely that these residents would not have a need to take part in any future scheme, as they have dedicated off-street provision.

The Petition asks the County Council, along with other agencies, to work together to resolve this issue. In compiling this report, contact was made with Richardson Endowed Primary School, Future Housing Group and Amber Valley Borough Council. The following responses have been received from these agencies:

The Head Teacher of Richardson Endowed Primary School is aware of these parking concerns and below is a synopsis of their thoughts:

"*I am aware that the school has a small minority of parents who choose to park without consideration of our neighbours. The school therefore does make attempts to regularly send out messages reminding parents and their carers to adhere to the Highway Code and to not obstruct driveways, accesses and road junctions.*

Unfortunately the previous access to the Bell Inn Public House car park has been withdrawn by the landlord due to concerns over it becoming unsafe for use. The school has asked for some possible assistance from the Local Safer Neighbourhoods Team to be a visual presence at school arrival and dispersal times.

The school have been informed that the Tennis Club on the outskirts of the village does allow use of its car park for parents at school times, however the Head has received nothing official to state that this is the case."

The Neighbourhood Officer from Future Housing Group provided a response to the lead petitioner:

"In terms of actions that can be taken by Futures Housing I believe that we are very limited in this case. As long as a vehicle is taxed and not contravening any other traffic laws, drivers are allowed to park anywhere on a public highway (but not on footpaths/pavements) where it is legal to do so. Road users have the right to park outside another person's home providing they are not contravening the Highway Code.

It appears from your letter that the main issues occur during school pick up and drop off times. I would advise that you speak to the school as they will be able to highlight any concerns with parking to parents as appropriate. Alternatively you can contact the Police on 101, particularly if drivers become abusive or threatening. Futures Housing Group have made the decision to remove all non-enforceable signage, therefore we will not be re-instating any signs regarding residents only parking etc."

A response was received from the Parking Manager at Amber Valley Borough Council:

"The CEO's (Civil Enforcement Officers) visit as often as they can. The days that a CEO visits result in a change in parking behaviour which then returns on the days when the CEO is not in attendance. I feel that we need to try to tackle this issue as education for both parents and children alike.

With this in mind I attach a leaflet that has been produced by the Office of the Police and Crime Commissioner in partnership with the Council's Community Safety Unit. I am asking if you could possibly print these leaflets and distribute to the children for them to take home." (Appendix 2).

In light of the feedback, the Highway Authority has received from the interested stakeholders and the constraints with regard to the requests made in the petition, the County Council is not in a position to undertake any physical measures in regard to the parking on Stafford Close, Smalley.

Local Member Comment
The Local Member, Councillor Kevin Buttery, is fully supportive of the school's approach to reminding parents and carers throughout the school year to adhere to the Highway Code and respect the local residents' needs by not parking over their driveways.

(3) **Financial Considerations** There are no financial implications in relation to this report.

(4) **Legal Considerations** Any signing that could be erected within the extents of the public highway would have to be in accordance with the permitted variants in the Traffic Signs Regulations and General Directions 2016.

Other Considerations

In preparing this report the relevance of the following factors has been considered: prevention of crime and disorder, equality and diversity, human resources, environmental, health, property, social value and transport considerations.

(5) **Key Decision** No.

(6) **Call-In** Is it required that call-in be waived in respect of the decisions proposed in the report? No.

(7) **Background Papers** Held on file within the Economy, Transport and Environment Department.

(8) **OFFICER'S RECOMMENDATIONS** That:

8.1 The Cabinet Member notes that no further action be taken to Stafford Close, Smalley.

8.2 The Local Member and lead petitioner be informed of the decision.

Mike Ashworth
Executive Director - Economy, Transport and Environment

Appendix 1 – Location Plan

Stafford Close – Smalley

Crime Prevention Advice

A message from the police

No waiting
No parking
No excuse

Parking outside school?

Please park in a safe and legal manner and consider others when leaving your vehicle.

Police & Crime Commissioner for Derbyshire

DERBYSHIRE CONSTABULARY

find us on facebook

follow us on twitter

101 in an emergency always call 999

www.derbyshire.police.uk

Parking outside school ?

Park safely • Park legally

- **DO NOT** stop or park near a school entrance keep off school keep clear markings
- **DO NOT** double park to pick up or drop off children from vehicles
- **DO** consider parking further away from the school and walking the last 5 or 10 minutes
- **DO** consider local residents and whether they have immediate access onto and off their driveway
- **DO** remember that people in wheelchairs or using push chairs may need to pass by your car on the pavement

The police can remove your unattended vehicle if you cause an obstruction. This means blocking a driveway or a path even for a short amount of time.

Civil Enforcement Officers can issue you with a penalty charge notice for stopping on school keep clear/entrance markings so keep them clear.

Please park in a safe and legal manner and consider others when leaving your vehicle.

Author: Bronwen Terry
Ext: 39181

Public

Agenda Item No. 4(d)

DERBYSHIRE COUNTY COUNCIL

MEETING OF CABINET MEMBER – HIGHWAYS, TRANSPORT AND INFRASTRUCTURE

23 January 2020

Report of the Executive Director – Economy, Transport and Environment

MEETING THE REQUIREMENTS OF THE CODE OF PRACTICE FOR WELL-MANAGED HIGHWAY INFRASTRUCTURE – APPROVAL OF TECHNICAL POLICY DOCUMENTS

(1) **Purpose of Report** To approve further technical documents which complement the current highway asset management policy, strategies and plans, and to agree delegation of future reviews and updates.

(2) **Information and Analysis** On 26 July 2018, Cabinet approved the Highway Infrastructure Asset Management Technical Policy (HIAM) documents produced in response to the introduction of new code of practice Well-Managed Highway Infrastructure in 2016 (Minute No:186/18 refers). The approval and implementation of HIAM plans and strategies were delegated to the Cabinet Member – Highways, Transport and Infrastructure in conjunction with the Executive Director – Economy, Transport and Environment. This report seeks to approve further policy documents which complement the current policy, strategies and plans. Since July 2018, work has been underway to develop more in-depth plans to support the approved HIAM documents.

The seven documents for which approval is sought are detailed below:

- Six HIAM documents, one relating to each of the highway asset areas of:
  - drainage;
  - electronic traffic management;
  - highways;
  - street furniture;
  - street lighting; and
  - structures.

  These documents define the Level of Service that can be expected and the current practices relating to Asset Data Capture, Inspections and Surveys of Assets, Lifecycle Planning, Maintenance Programmes, Asset Financial Information, Asset Forward and Annual Programme, Asset Risk

Register, Competency of Staff and Performance Management. Development areas have also been identified.

- Traffic Network Management Duty Plan: This document sets out the criteria by which the operations of the highway network are managed (i.e. how traffic is kept moving). It encompasses network management and co-ordination, activities within the highway, including road closures and lane closures resulting from highway maintenance works, new developments and the work of statutory undertakers, routeing of different classes of vehicles, network restrictions and enforcement and management of conflicts between different highway users.

These documents provide the basis of the Council's approach to meeting the requirements of the 2016 Code of Practice Well-Managed Highway Infrastructure and provide the wherewithal for an efficient and effective risk-based and transparent approach to managing the drainage, electronic traffic management, highways, street furniture, street lighting and structures assets. The proposals set out to deliver a level of service that will be safe, sustainable and deliverable within current budgetary constraints across the highway network. Safety will remain the Council's key driver in delivering a safe and reliable network. However, levels of service across the network will remain dependent on the available budget, with the priority given to the resilient network and using asset management processes to ensure the most efficient and effective spend.

(3) **Financial Considerations** The delivery of levels of service will remain subject to budgetary availability.

(4) **Legal Considerations** The Council has a duty under Section 41 of the Highways Act 1980 to maintain publicly maintainable highways. Section 58 of the Act provides a defence to actions resulting from failure to maintain a highway where the Council is able to prove it has taken such care as is reasonably required, to prove it ensured that the highway in question was not dangerous to traffic.

Developing and setting out the Council's risk based approach will enable the Council to deliver its services in line with existing statutory and national best practice and will provide a firm foundation in defending claims made against the Council.

(5) **Human Resources Considerations** The development and implementation of a risk based approach, as set out in this report, can be accommodated within the existing staff resource.

(6) **Social Value Considerations** A risk based approach to the maintenance and management of the highway infrastructure network will enable the businesses, residents and visitors of Derbyshire to benefit from a safe and reliable network.

Other Considerations

In preparing this report the relevance of the following factors has also been considered: prevention of crime and disorder, equality and diversity, human resources, environmental, health, property and transport considerations.

(7) **Key Decision** No.

(8) **Call-In** Is it required that call-in be waived in respect of the decisions proposed in the report? No

(9) **Background Papers** Held on file within the Economy, Transport and Environment Department.

(10) **OFFICER'S RECOMMENDATIONS** That the Cabinet Member:

10.1 Approves the technical documents forming the basis of this report and attached as background papers.

10.2 Delegates reviews and major updates of the documents and their related appendices contained within this report by agreement between the Cabinet Member – Highways, Transport and Infrastructure and the Executive Director of Economy, Transport and Environment.

10.3 Delegates minor updates to the technical policies and their related appendices contained within this report to the Executive Director – Economy, Transport and Environment.

Mike Ashworth
Executive Director – Economy, Transport and Environment

HIGHWAY INFRASTRUCTURE ASSET MANAGEMENT PLAN FOR DRAINAGE

JANUARY 2020

AN ELEMENT OF THE HIGHWAY INFRASTRUCTURE ASSET MANAGEMENT SYSTEM

Document Information

Title	Highway Infrastructure Asset Management Plan for Drainage
Author:	Teri Ford/Bronwen Terry
Reviewed:	Glyn Dutton

Document Issue Status

TABLE OF AMENDMENTS					
NO	**APPROVAL DATE**	**SECTION**	**PARAGRAPH**	**DETAILS**	**AUTHOR**
1	xx/xx/20xx	All	All	First Issue	

Contents

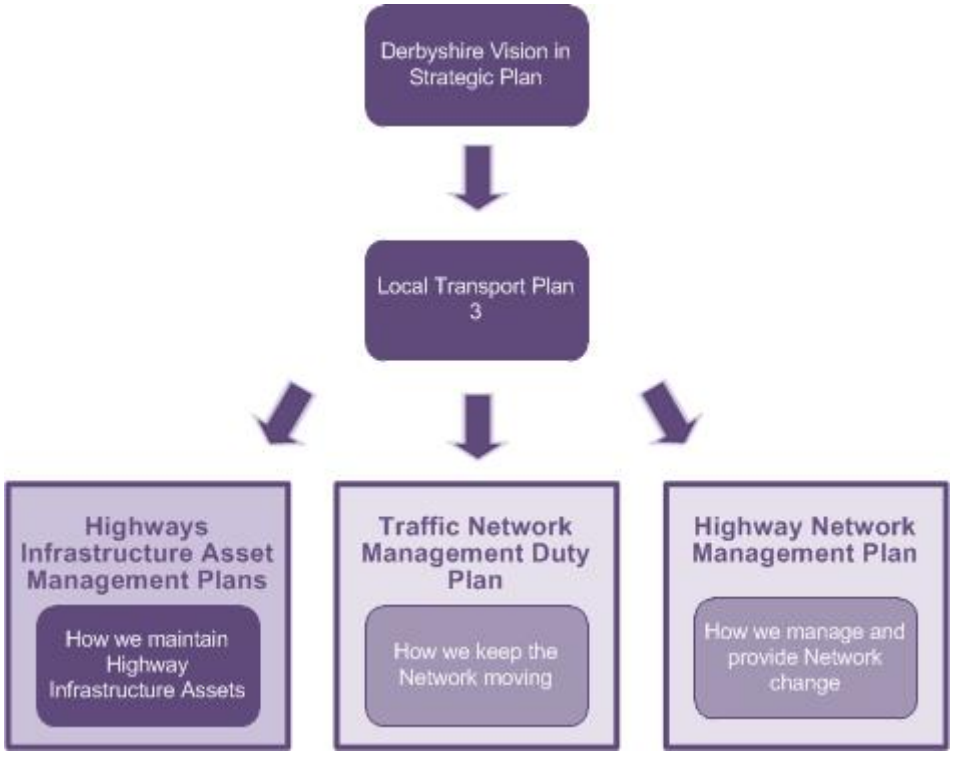
1. INTRODUCTION

This document provides the technical details that supports the Highways Infrastructure Asset Management Strategy and Plan and forms part of the Highways Infrastructure Asset Management suite of documents. It is a working document that provides the processes and information used internally by staff undertaking roles in delivery of service.

This document will recognise a number of Development Areas where Derbyshire has recognised potential improvements to the service they deliver. These development areas are aspirations only and will be reviewed on an annual basis to assess whether they are deliverable from a financial and resource perspective. A breakdown of these Development Areas can be found in Appendix A.

The following figure shows this document in context with other key documents in how the network is managed, maintained and changed:

Diagram 1: Plans and Policy Framework



2. SCOPE

This document covers the drainage assets on the Derbyshire highway network that Derbyshire have a responsibility to maintain. Highway drainage is provided to safely and efficiently capture surface water run-off and convey it away from the highway to alleviate flooding and protect metalled areas. Highway drainage includes the following:

- any drainage assets that convey water courses under the highway and this is managed by the Structures section
- any drainage assets that convey highway water away from the highway and this includes gullies, highway drains, ditches, grips, drainage pipes, connections, manholes, catchpits, headwalls, trash grids, soakaways, interceptors, swales,

balancing ponds, pumping stations, kerb drainage, linear drainage, soughs, sustainable drainage systems (SuDS) and drainage channels.

This document, however does not include those drainage elements that are maintained by third parties such as Utilities, Highways England, the Environment Agency, Canal and River Trust, local land owners and businesses.

Cross footway channels and drains that are used to convey roof water from properties, from a downpipe, into the carriageway channel is the responsibility of the owner(s) of the down-pipe. Should defects be noted during any inspection regime then these will be brought to the attention of the property owner(s) who will be required to undertake the necessary repairs. In the event of a presence of a safety risk Derbyshire would take action to reduce the risk and recharge where feasible.

Ditches are not generally maintained by the highway authority and are usually the responsibility of the adjoining landowners. Landowners who are advised to maintain their ditches, to prevent flooding, may be made aware of any ecological interest associated with their ditches and given advice on how to maintain ditches and wildlife together plus any respective contact details for specific advice.

This document does not include those responsibilities and duties required by the Lead Local Flood Authority, these are conducted by the Flood Risk Management team. Further details of their work can be found on Derbyshire website. However, this team liaise closely with both the Highways Maintenance and Structures sections. The Flood Risk Management team has a duty under Section 21 of the Floods and Water Management Act 2010 to maintain an asset register. The Asset register will contain features which are likely to have a significant effect on flood risk. The process to create this register is currently underway.

The Well Managed Highway Infrastructure states in Recommendation 22:

“Drainage assets should be maintained in good working order to reduce the threat and scale of flooding. Particular attention should be paid to locations known to be prone to problems, so that drainage systems operate close to their designed efficiency.”

3. ASSET CAUSES OF DETERIORATION

The main causes of drainage assets deterioration are itemised below:

Table 1: Deterioration and Associated Defects

Asset Type	Cause of Deterioration	Description	Typical Defects
Gullies/ Manholes/ Drainage Kerbs	Wear and tear/ ageing	Action of vehicular traffic and weathering	Defective ironworks
	Blockage	Combination of exposure of the site and type and volume of the run-off	Standing water
	Theft	Theft of over ground assets	Missing assets
Underground Drainage Assets	Wear and tear/ ageing	Action of vehicular traffic, ground disturbance, root ingress and poor cyclic maintenance	Difficult to observe/predict or maintain but can include cracks, collapses and displaced joints.
	Intrusion	Intrusion from tree roots and utilities	Blocked or broken connections/systems

4. NATIONAL/LOCAL GUIDANCE AND RELATED DOCUMENTS

The maintenance of drainage assets are governed by a series of national documents and guidance including:

- Well-managed Highway Infrastructure: A Code of Practice 2016
- Guidance on the Management of Highways Drainage Assets 2012
- The Highways Act 1980
- The SuDS Manual (CIRIA 753)
- Flood Risk Regulations 2009
- Flood and Water Management Act 2010
- National Planning Policy Framework

These documents are held online and links are provided above.

This document is a live document that will be reviewed biannually or whenever a significant change is required to any of the processes or procedures documented within it.

Derbyshire County Council has also produced a series of local documents:

- Preliminary Flood Risk assessment May 2011 (including 2017 update)
- Local Flood Risk Management Strategy July 2015
- Flood Contingency Plan March 2018
- Culvert Policy June 2015
- A series of flooding guidance notes

These documents are all available either on the Derbyshire County Council website or on the Derbyshire Resilience website. Links are provided above.

5. LEVELS OF SERVICE AND CRITICAL ASSET IDENTIFICATION

The Highways Infrastructure Asset Management Policy, Strategy and Plan have developed and documented the overarching Levels of Service derived from the authority's statutory duties, the national and regional guidance, the management and mitigation of risk both to the service user and the authority and the volume and type of traffic using the network.

The Levels of Service that define the Council's approach to the management of the drainage assets have been defined against the Network Hierarchy and the Resilient Network. These can be accessed online here. There are two levels of service in regards to safety on the network due to budgetary constraints. Levels of Service will be reviewed and amended regularly to take into account the budgetary position. The drainage critical assets will defined as part of Development Area 1. The table 2 shows how the two levels of service relate to the network levels. The drainage critical assets are defined as those drainage assets which produce a significant flood risk that would pose a risk to life, property, infrastructure or provide an impassable road for more than 2 hours. It has been split into those assets that are the responsibility of the highway division, and those assets that are the responsibility of another body. The register has been derived from risk assess scoring those assets which have been identified through a combination of the following areas:

- Previous historical flooding locations
- Environment Agency surface water flood map
- Flooding enquiries
- Local knowledge

- Located on the resilient network

The register is held within CONFIRM and the drainage critical assets register and methodology to define will be added to Appendix B once Development Area 1 is completed

DEVELOPMENT AREA 1: Drainage Critical Assets

Establish the definition, methodology, criteria, risk assessment process to define the critical assets Guidance notes and the asset register are currently under review. The table below shows how the Levels of Service relate to the different network hierarchy levels.

Table 2: Drainage Specific Levels of Service

	Drainage on Resilient Network or Critical Assets Register (To be completed as part of Development Area 1)	Drainage on Network Hierarchies 1 to 7 inclusive (To be completed as part of Development Area 1)
	Level of Service 1	**Level of Service 2**
	Safety + Serviceability + Sustainability + Customer Service	**Provision of safety related issues and Customer Service only**
Objective	Comply with statutory obligations and to provide Network Safety and customer service RN to be prioritised to ensure availability and minimise costs where budgets allow	Comply with statutory obligations and to provide Network Safety and customer service
Standard	Comply with Code of Practice and apply asset management techniques to optimise whole life costs.	Comply with Code of Practice and apply asset management techniques to optimise whole life costs.
Impact/ Risks/ What it means	Programme of inspections and determination of condition. Lifecycle planning and programme to tackle backlog of improvements to alleviate highway flooding. Progressive mapping of underground systems and condition underway using a risk based approach. Safety inspections and identified safety defects prioritised according to risk based approach. Gully drainage assets proactively maintained through intelligent cyclic maintenance with a risk based approach. Officer observation and all other non-safety repair requests added to the programme to be dealt with in accordance with the timescales set out in the HIAMP.	Lifecycle planning leading to 3-10 year forward programme with prioritised annual programming. Predominantly reactive maintenance Minimal intervention to prevent asset deterioration Safety inspections and identified safety defects prioritised according to risk based approach. Likely increase in non-safety defects with potential for increase in third party insurance claims.

6. IDENTIFICATION OF NEW ASSETS – DATA CAPTURE

The following table highlights the ongoing process with regard to identifying new assets:

Table 3: Processes to Identify and Record New Assets

Structure Type	Resilient Network Level of Service 1	Network Hierarchies 1 – 7 Level of Service 2
Culverts <0.9m in diameter (from structures HIAM Part 2)	Development Area 3	
Gullies	We have details of all of these, therefore any new assets will be recorded as as-builts through Section 38/278 acquisitions, and added onto CONFIRM through Development Areas 13, 14 and 15. This is done for the entire network.	
Highway drains	Flood risk team do hold information and also record any information from site surveys. Utility companies also hold some data. See Development Area 7	
Ditches	Development Area 5	
Grips, trash grids and linear drainage (kerb inlets etc)	Development Area 6, 8 and 11	
Drainage channels	There is no current plans to gather data for this asset group.	
Drainage pipes, connections, non-return valves, pumping stations, catchpits, headwalls and soughs	Development Area 8 and 11	
Manholes	Development Area 9	
Interceptors and Pump Systems	Development Area 10 and 12	
Sustainable drainage systems (swales, balancing ponds, soakaways etc)	There is data held on what we currently have, some information may exist on previous as-builts for new infrastructure and is covered by Development Area 11	

All data is to be recorded and stored in accordance with the Data Management Strategy. For all drainage assets the attributes recorded into CONFIRM need to be determined.

7. INVENTORY UPDATE AND ASSET CAPTURE

DEVELOPMENT AREA 2: Attributes to be Collected

Establish the attributes to be collected for each drainage asset within CONFIRM. To be established by Highway Maintenance, Flood Risk Management and Highways Strategy in a new working group. Once established then all those undertaking site work should use the mobile CONFIRM app to record any asset located at the time of survey.

DEVELOPMENT AREA 3: Culvert Desktop Analysis

Analysis of previous desktop exercise to identify possible locations where new culvert assets may exist. Asset Management have identified areas where culverts exist but this needs to be digitised into CONFIRM.

DEVELOPMENT AREA 4: Highways Drains

Derbyshire require As Built documentation to enable data to be added to the CONFIRM system to allow levels of service to be allocated.

DEVELOPMENT AREA 5: Ditches Desktop Analysis

Desktop exercise required to cross reference the Environment Agency digital river network with the highway boundary. This area of work is reliant on the highway boundary being digitised by the Highway Searches team. Once the assets are identified they require digitisation into CONFIRM.

DEVELOPMENT AREA 6: Grips and Trashscreens Information Gathering

The area teams hold records (both paper and in heads) regarding grips and trash screens. This information will require analysis and digitisation into CONFIRM.

DEVELOPMENT AREA 7: Water Utility Companies Available Information

Flood Risk Management to request the existing plans held by water utility company information. This has been gathered from one utility company but still awaiting the 2 remaining utilities. If necessary information can be requested using a statutory power as the Lead Local Flood Authority. This information will show all public sewers owned and maintained by the Water Companies, and may also show other drainage systems which may be Derbyshire County Councils responsibility This information once received requires digitisation into CONFIRM.

DEVELOPMENT AREA 8: Other Collected Information Via Driven Capture Survey

Information should be captured through the driven capture survey.

DEVELOPMENT AREA 9: Manhole Desktop Analysis

The outputs from Development Areas 6 and 7 should be cross-referenced to identify those manholes that are maintained by Derbyshire.

DEVELOPMENT AREA 10: Interceptor and Pumps Desktop Analysis

Derbyshire currently have paper copies of 6 locations, these require digitisation and identification of the manufacturer and their guidelines. An interceptor needs a licenced contractor to remove and process waste. List of contractors used to be ascertained to enable attributes to be added to CONFIRM. There are 12 – 14 different types of Oil Interceptors available or in place in Derbyshire

DEVELOPMENT AREA 11: Digitisation of Paper Documentation

Those records that have previously been recorded as an interim measure on paper and previous scheme as-builts ie by maintenance/design engineers and those within the flood team, these require digitisation into CONFIRM.

DEVELOPMENT AREA 12: Section 278 and 38 New Assets

The methodology of how we gather data relating to new assets as a result of section 278 and 38 developments needs to be improved.

Risk assess the remaining network for potential issue sites and do those next using the following criteria:

- Flooding enquiries
- Historical flooding data
- Environment agency surface water map

For certain assets, approximate information can be established from extrapolating from known surface drainage features such as gullies/manholes or from recent maintenance records or recent highway improvements. Therefore each asset should have a confidence level for how accurate we think the data is likely to be (it is unlikely that we will be establish a 100% confidence level in all the data due to the complex nature of where water goes/who owns what).

Some assets are considered more sustainable and these will have a bigger impact on highway land. These include swales (shallow open ditches), soakaways and pond. Discussions need to take place with Development Control to discuss the costs involved for them producing autocad drawings and inputting them onto CONFIRM and creating consistent design layers.

8. AS-BUILTS PROCESS AND DATA CAPTURE

Development Control Process

Where new assets are provided through the development control/planning process, the as-builts are to be provided by the developer and sent to each asset owner, who is responsible for entering them onto the Single Asset Management System as detailed in the Quality Management System. If the number of assets is small in number then this task is to be completed by the asset owner, however if the number of assets to be added is likely to be significant then this data capture process will be completed by the Highway Strategy team using the driven asset capture survey. See Appendix C for the detailed process. It is the asset owner's decision as to which process is to be adopted, if it is the latter process, then development control will include this item in the brief for the developer to contribute to the cost.

DEVELOPMENT AREA 13: Development Control Process

The Development Control process needs to ensure that developer schemes (S278 and S38) should produce an as built drawing which is checked by the Clerk of Works in construction and then sent to the asset owner for them to input. This task will be carried out by 1 person to complete all assets at the same time which is funded by developer control budget. Discussion with Development Control needs to occur to establish if fees need to be increased to cover this additional cost and to ensure the as built output meets the requirements of CONFIRM.

Internal Capital Schemes

Where new assets are provided by the internal design and construction services, the design brief is to include the production of an as-built/photograph of each new asset to the asset owner as detailed in the Quality Management System. If the number of new assets is small in number then the necessary update to the asset management system is to be completed by the asset owner, however if the number of new assets to be added to the database is likely to be significant then this data capture process will be completed by the Highway Strategy team using the driven asset capture survey. See Appendix C for the detailed process. It is the asset owner's decision as to which process is to be adopted. However, if it is to be the latter process, then a percentage of the overall scheme cost is to be allocated to the capital scheme to complete this task.

DEVELOPMENT AREA 14: Update Inventory – Internal Capital Schemes

This process needs developing and implementing.

Internal Revenue Schemes

Where ad-hoc new assets are provided by the asset owners' design team and internal construction services, it is the responsibility of the construction service team or the design team to provide the asset owner with an as built drawing and photo of the completed work so that the asset owner can update the asset database accordingly.

DEVELOPMENT AREA 15: Update Inventory – Internal Revenue Schemes

This process needs developing and implementing.

9. INSPECTIONS AND SURVEYS

The following highway drainage assets are routinely inspected to ensure they safely and effectively capture surface water run-off and convey it away from metalled areas, in order to alleviate flooding and protect the fabric of roads and footways.

- Culverts <0.9m in diameter are inspected by the structures section and these inspections are detailed within the Structures HIAM Part 2 document.
- Gullies are inspected as part of cyclic cleansing across the County.
- Manholes are ideally inspected on a 5 year basis although there is no current guidance reflecting this. Pumps and interceptors are inspected in accordance with manufacturer's guidance as a minimum with this increasing where risk is identified.
- Hydrobrakes and Hydrodynamic Separators are inspected. The methodology differs according to the specifics of each asset.

The remaining drainage assets are inspected by the maintenance section reactively when an adhoc enquiry of an issue has been received.

DEVELOPMENT AREA 16: Technological Advances and Inspection Processes

Technological advances need to be considered when reviewing all inspection processes.

Routine Surveillance

This is undertaken via highway infrastructure asset safety inspections which are undertaken by Highway Inspectors and are designed to identify, assess, record and prioritise the repair of identified safety defects which may present an immediate danger or significant

inconvenience to users of the highway. The information detailing the processes involved in completing safety inspections and the risk based approach to safety defect assessment and repair are detailed in the Highway Infrastructure Asset Safety Inspections Manual.

Initial Asset Identification Inspection – Data Capture

At the point where a new drainage asset of any type has been provided or identified, all attribute data required by CONFIRM will be provided. Where a new asset has been provided it is the responsibility of the following to inspect the asset to ensure that it meets the design criteria:

- Externally provided schemes – the construction clerk of works
- Internally provided capital schemes – the designer and it will be accepted by Network Planning as the asset owner.
- Internally provided revenue schemes –the construction services. Where a new asset has been identified the following will be undertaken:
  - Culverts: an initial inspection which will include a risk assessment to establish the appropriate interval time to the next inspection
  - Interceptors: These are given a RAG rating on initial inspection as these are high priority as can attract fines if they fail. The rating is based on critical flooding areas.

DEVELOPMENT AREA 17: Adding RAG Ratings to Specific Drainage Assets

- Trash screen on culverts where there is a significant risk of nearby property flooding should also be given a RAG rating on initial inspection.
- Assets which provide protection to a watercourse or groundwater in terms of pollution should also be considered for a RAG rating.
- Soakaways, hydrobrakes and hydrodynamic separators should also be considered for RAG rating on initial inspection as they are prone to fail.

All remaining drainage assets: inspections will be conducted based on their risk rating. This is established through a risk assessment of the criteria of flooding enquiries, historical flooding data, environment agency surface water map and location on the network hierarchy. Guidance for this process can be found on this website.

DEVELOPMENT AREA 18: Consistent Inspection Processes

Derbyshire are to implement a new process to ensure inspections of new assets are carried out in a consistent way across the entire county which may lead to efficiency savings in some areas and take into account risk. Inspection times will be based on specific site based risk assessment. Process maps for new assets inspections, cyclic inspections and maintenance of assets will also be will be developed as part of this process. Process maps will be added to Appendix C.

Enquiry/Adhoc Inspection

As a result of a highway safety inspection requesting additional investigation into the underlying cause of a safety defect or due to a customer enquiry, an adhoc inspection may be undertaken of any drainage asset type.

The process for this type of inspection can be found in Appendix C:

Cyclic Inspection – Gullies only

See Development Area 18 above.

Pre/Post Event Inspection (Safety Inspection)

An inspection will occur for those assets on the drainage critical assets register prior to and after each major rainfall event, where the trigger criteria are met. The trigger criteria are as follows:

- Red and some yellow rainfall warning and are detailed further in the Adverse Weather Implementation Plan. This is available internally.

Within the adverse weather policy there is reference to what needs to be checked pre event. These include known flooding spots and known wooded areas near resilient network. As part of the Flood Contingency Plan on the Derbyshire Prepared website the Council are required to arrange clearance of critical assets to water flow on county council owned land and highways.

All condition data should be recorded and stored within the CONFIRM computer program. Data is controlled in accordance with the Data Management Strategy.

10. ASSET CONDITION AND ASSESSMENT

Condition of Assets

Derbyshire record the condition of gullies only via cyclic cleansing. This information is then added to SAM's.

11. LIFECYCLE PLANNING

DEVELOPMENT AREA 19: Adding All Condition Data to SAMs

Derbyshire would like all condition data stored within SAMs. However, currently this data is not all fully within the system and it is not currently used as a lifecycle planning tool. It would allow for Gross Replacement Costs and Depreciated Replacement Costs to be calculated. It also can produces and reports both national and local performance data.

Therefore, currently there is little lifecycle planning being undertaken for drainage assets.

12. MAINTENANCE PROCESSES

There are three types of maintenance works undertaken:

(a) **Reactive maintenance**, covers the identification and repair requirements of safety defects generally resulting from vehicle impacts on the drainage asset. Reports can be received from third party sources such as police, members of the public, other council departments and the call centre. Repairs are actioned on a priority basis dependant on the severity of the damage and location on the network on a risk based approach. Reactive Maintenance Process Maps can be found in the Reactive Maintenance Teams Operational Manual.

(b) **Routine or cyclic maintenance** is a do-minimum response, reacting to concerns from inspections to ensure that it is able to safely and efficiently capture surface water run-off and convey it away from metalled areas. This type

of maintenance does not improve the general condition of the asset but should improve its efficiency. A risk based approach (gully intelligent) is used to prioritise the cyclic maintenance works identified. Typical minor works include:

- Gully cleansing
- Trash Screens
- Oil Interceptors
- Manholes

(c) **Planned or programmed works**, are identified on a risk based approach. Schemes are developed to improve the longevity and overall condition of the drainage asset. Typical works include the following:

- Piped drainage repair
- Clearing of ditches, swales, ponds
- Repairs to manholes, catchpits etc
- Installation of sensors to automate remote reporting of performance of critical drainage assets
- Other flooding preventing schemes
- As part of local safety schemes, major developments, transport schemes (may include – resurfacing, reprofiling, patching, drainage improvements eg new gullies, drainage runs etc)
- Provision of new drainage infrastructure.
- Contribution to collaborative schemes to deal with flooding.

DEVELOPMENT AREA 20: Development of Planned Works Process Maps

Planned works process maps are currently under review and need to be developed in the future.

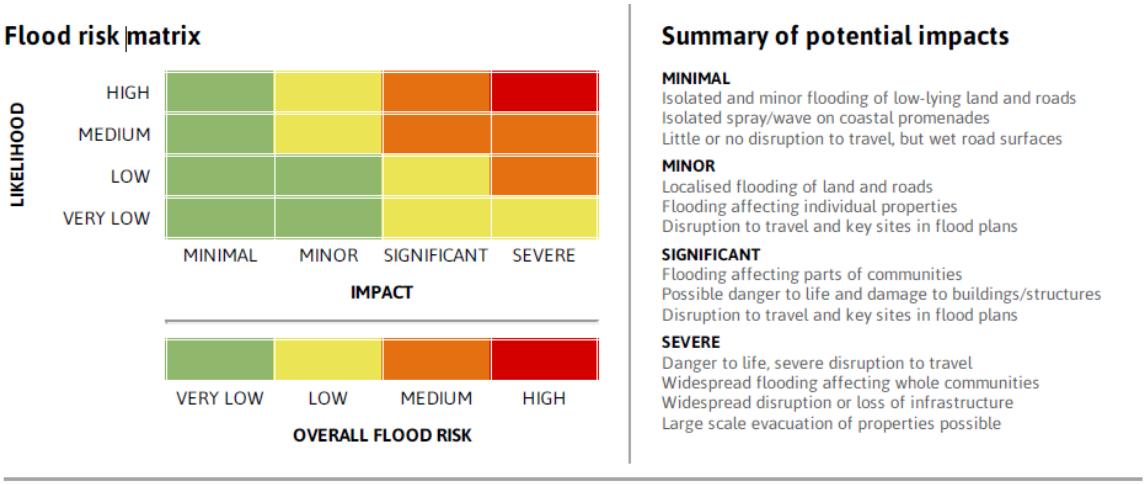
Maintenance requirements when flooding is predicted

Derbyshire can receive 4 types of flood warning – green, yellow, amber and red. These warnings are communicated to Derbyshire via the Flood Forecasting Centre. Derbyshire also receive alerts for adverse weather events via Emergency Planning. This area is covered in depth in the Adverse Weather Policy.

Maintenance action will be categorised based upon the likelihood and the impact of the flood event.

The image overleaf shows the flood risk matrix which supports the categorisation of action of flood risk:

Diagram 2: Flood Risk Matrix



DEVELOPMENT AREA 21: Flooding Maintenance Response Process

Derbyshire would like to develop a maintenance response process for when a flood warning is received. Green warnings will be noted but no action taken. Yellow warnings will be actioned only if we also receive additional information from emergency planning. All decisions will be recorded. Amber and Red warnings will involve discussion with Emergency Planning and will follow the response process set out in the Adverse Weather Policy (currently under review). As part of Development Area 1 an inventory of critical assets will be developed alongside relevant maintenance regime. These will be individually added to the CONFIRM system as an asset which will detail asset owner, maintenance requirements, risk matrix and have the ability to record action taken against it.

13. BACKLOG

Until Derbyshire complete Development Area 1 to ascertain a list of critical assets backlog cannot be calculated.

The Flood Risk Management team are key stakeholders and must be involved in all planning of this area of work.

14. VALUE MANAGEMENT/ENGINEERING APPROACH

DEVELOPMENT AREA 22: Adopting a Value Management/engineering Approach

Derbyshire would like to adopt a value management approach whereby we take into account the benefits of undertaking maintenance and the risks of not undertaking maintenance which then provides a prioritised list for Value Engineering to ensure we choose the optimal solution to ensure maintenance need is met while reducing waste and inefficiencies.

15. CROSS ASSET CONSIDERATION

When considering financial requirements Derbyshire will consider allocating budget to those assets that require more financial input regardless of where the money was originally allocated.

16. FORWARD PROGRAMME

This is based on a number of areas and include:

1. Pumping stations and interceptors which have a critical lifespan which defines when the asset is likely to die.
2. Gullies use intelligent cleansing to predict future requirements and support the forward programme of works on this asset.
3. Network need – ie problems areas are identified a RAG rating is applied and then this leads to a prioritisation of drainage schemes.

The prioritisation of the schemes identified within the forward programme will be determined annually by available budget, condition and risk.

17. ANNUAL PROGRAMME

This is formed from the first year of the forward programme depending on the capital allocation available and can be found on the Derbyshire website.

18. RISK REGISTER

A risk can be defined as an uncertain event which influences the desired performance of an asset. A risk factor is the produce of the severity of an event and the likelihood of its occurrence. Derbyshire County Council has a well-established risk management process that overarches all service areas.

The risk management process concentrates on four main issues, by applying these risk management principles, the council will be able to more appropriately target resources and to deliver services and projects in a way that ensures the council's overall exposure to risk is minimised.

The following risk register identifies risks and appropriate mitigation measures.

Table 4: Risk Register

Risk Level	Identify Risks	Evaluate Risk	Manage Risk
Strategic	Understanding the Asset	The absence of asset information compromises the ability to provide lifecycle planning and consider budgetary allocations	Identify the current state of the drainage assets to enable lifecycle planning and budgetary allocation.
	Budget Concerns	The absence of relevant finances will means drainage assets deteriorate compromising the road safety of road users and damage the infrastructure surrounding the highway	Budget management and apply for additional funding where feasible Lifecycle planning Budget Management
	Changes to Traffic	Changes to traffic patterns and the usage of road may alter network prioritisation of asset stock	Pre-empt network changes or travel patterns at the design and planning stages
	Climate Change	Climate change can increase deterioration causes, affecting the lifecycle of some assets and their components meaning intervention will be required sooner than expected	Lifecycle planning/inspections to encompass climate predictions

19. COMPETENCY AND TRAINING

All inspection procedures, toolbox talks and risk assessments are reviewed, updated and then trained on an annual basis. The departmental code of practice is reviewed on a five yearly basis. A guide for inspection is has been written to standardise inspection activities.

All external contractors undertaking condition inspections are required to meet the same minimum Derbyshire specifications. This is included in the requirements in the tender documentation. The agency agreement with High Peak, North East Derbyshire and South Derbyshire district councils requires the same level of competence with the control/monitoring devolved to Derbyshire to manage it.

All competency and training requirements are summarised within the skills matrix in Appendix D and managed through the Derbyshire County Council MyPlan system. This will be developed as part of Development Area 23.

DEVELOPMENT AREA 23: Skills Matrix

Skills matrix needs to be developed which will support the Councils MyPlan system.

20. PERFORMANCE MANAGEMENT FRAMEWORK

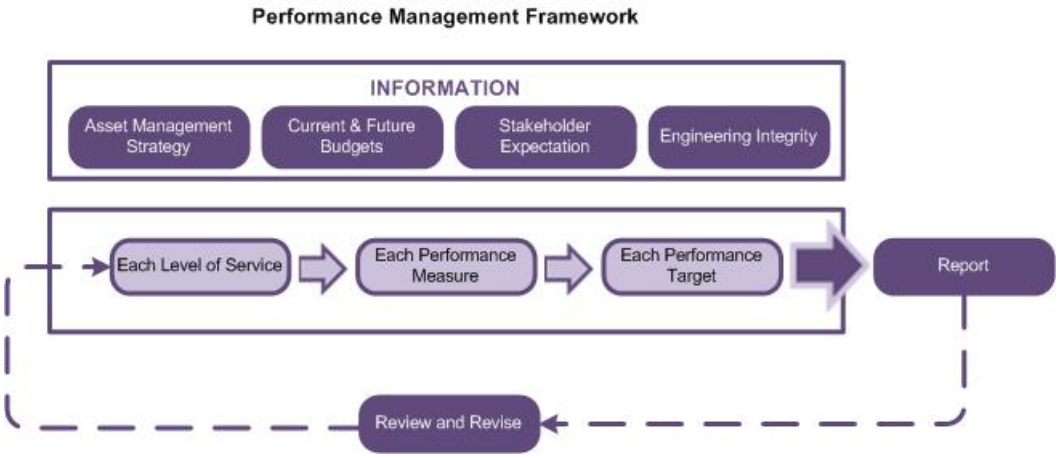
The Performance Framework is used as a tool to inform, measure, review and drive the management and decision-making processes associated with implementing corporate changes and day-to-day decisions relating to the delivery of services, linked to the network hierarchy. The figure below shows the performance management framework.

It is not intended that the Council creates a host of measurements that serve little purpose other than to demonstrate the presence of a framework. At any level, external-facing performance measures should show how well services are being delivered and whether objectives are being achieved.

Internally, a range of input and output measures may be used for monitoring purposes but the key indicators should reflect performance in key service areas to inform senior managers as well as corporate and stakeholders of the service as a whole.

The Performance Management Framework diagram is shown below:

Diagram 3: Performance Management Framework



The table below shows the performance measures and targets for carriageway:

Table 5: Performance Measures

Level of Service	Performance Measure	Level of Service 1 Resilient Network	Level of Service 2 Network Hierarchies 1 - 7
		Target	Target
Safety	% of urgent defects repaired in target time	100%	
	% of 32 hour defects repaired in target time	90%	
	% of 9 day defects repaired within target time	90%	
	% of 28 day defects repaired within target time	80%	
Serviceability	% of cyclic gulley cleansing completed within target time	90%	80%
Sustainability	Backlog	See Development Area 1	
	% requested as-builts provided	100%	
	% asset inventory updated	100%	
Customer Service	NHT % of residents satisfied with the provision of drains HMBI 11	57%	
	NHT % of residents satisfied with how Derbyshire keep drains clear and working HMBI 12	55%	
	NHT % of residents satisfied with how Derbyshire deal with flooding on roads and pavements HMBI 22	50%	

21. COMMUNICATIONS

All information relating to communication is contained with the Highways Communications Plan.

22. CLIMATE CHANGE ADAPTION AND CIVIL EMERGENCIES AND SEVERE WEATHER EMERGENCIES PLANS

All plans relating to this area of work are included on the Derbyshire Prepared website and Derbyshire have taken or are taking action against all of the recommendations raised in the 2009 3 Counties Alliance Partnership The Effects of Climate Change on 3CAP's Highway Network Polices and Standards.

The corporate climate change manifesto can be found here.

23. HERITAGE AND CONSISTENCY WITH CHARACTER

Generic information that will relate to all assets and crosses all HIAM Part 2 documents and therefore are included in the Highway Network Management Plan.

24. CARBON REDUCTION

Generic information that will relate to all assets and crosses all HIAM Part 2 documents and therefore are included in the corporate Carbon Reduction Policy.

25. ENVIRONMENTAL IMPACT, NATURE CONSERVATION AND BIODIVERSITY

Generic information that will relate to all assets and crosses and crosses all HIAM Part 2 documents and therefore are included in the Highway Network Management Plan.

26. SUPPLY CHAIN COLLABORATION AND COLLABORATION IN SERVICE DELIVERY

Gully cleansing and jetting are carried out using term contracts.

Data is held by utilities and as part of Development Area 7 this data will be collected to enable improved service delivery.

27. DELIVERY

Delivery is primarily completed through the Derbyshire County Council Construction Services. The construction process is currently under review.

28. PROCUREMENT

Derbyshire use a variety of suppliers according to service need and locality requirements. We have an in-house service provider for construction works and we also use external providers which are sourced via a framework system.

29. OPERATIONAL POLICIES

Operational Policies are covered in the Highway Network Management Plan.

30. APPENDICES

APPENDIX A: DEVELOPMENT AREA SUMMARY

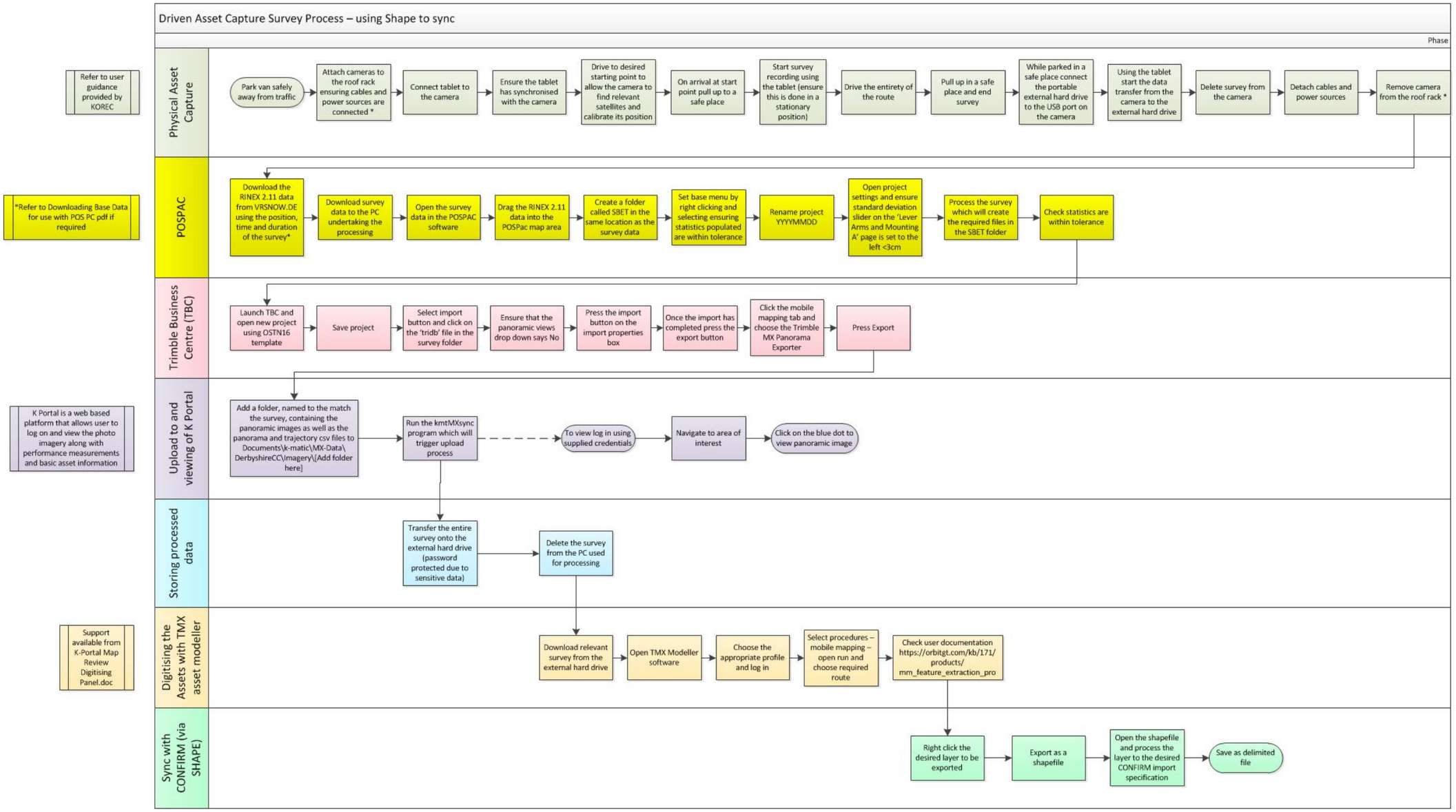
Table 6: Development Area Summary

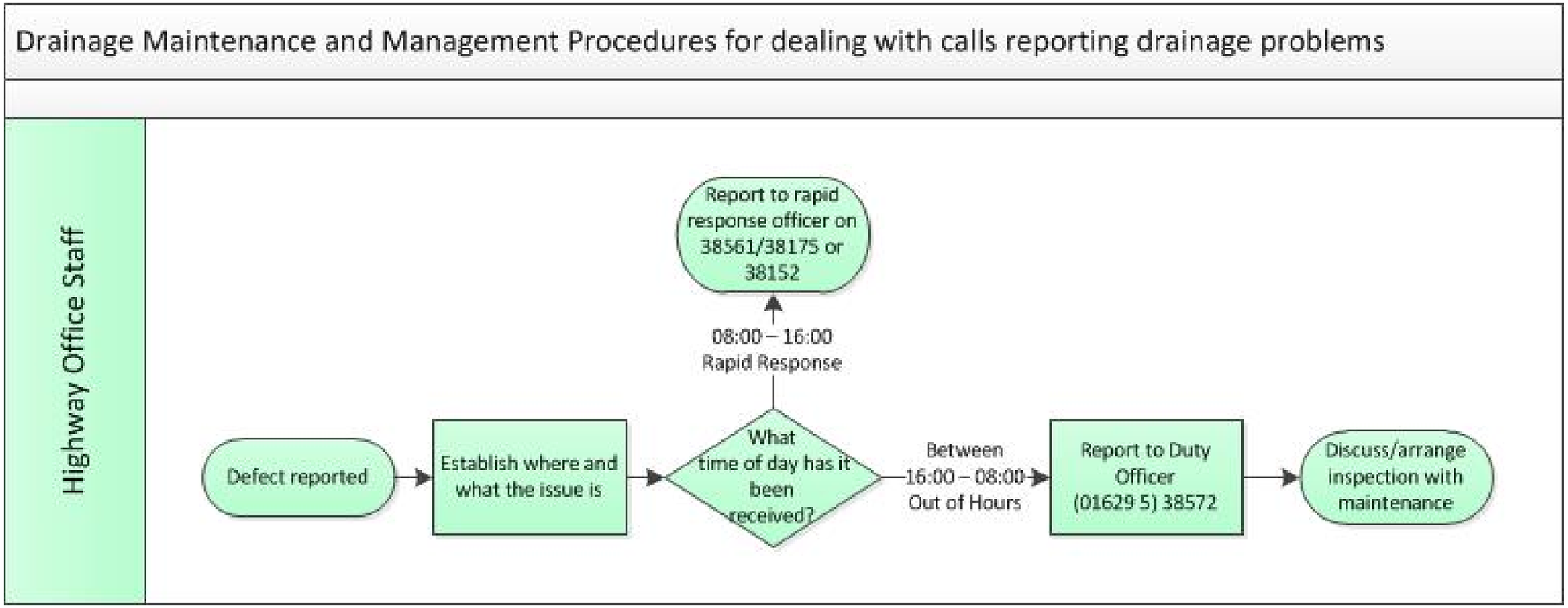
Development Area Number	Development Area Title	Action Taken
1	Identification of critical assets	
2	Identification of attributes to be collected	
3	Culvert Desktop Analysis	
4	Drainage As Built Creation	
5	Ditches desktop analysis	
6	Grips and trashscreen information gathering	
7	Water utility company information gathering	
8	Driven capture survey	
9	Manhole desktop analysis	
10	Interceptor desktop analysis	
11	Digitisation of paper documentation	
12	Section 278 and 38 new assets	
13	Creation of development control processes	
14	Update inventory internal capital schemes	
15	Update inventory internal revenue schemes	
16	Review of inspection activities in light of technological advances	
17	Adding RAG ratings to specific drainage assets	
18	Ensuring consistent inspection processes	
19	Adding all condition data to SAMs	
20	Development of Planned Works Process Maps	
21	Flooding Maintenance Response Process	
22	Adopting a value management/engineering approach	
23	Creation of a skills matrix	

APPENDIX B: DRAINAGE CRITICAL ASSETS REGISTER

To be added as part of Development Area 1.

APPENDIX C: PROCESS MAPS





APPENDIX D: SKILLS MATRIX

This will be added as part of Development Area 23.

HIGHWAY INFRASTRUCTURE ASSET MANAGEMENT PLAN FOR HIGHWAYS

JANUARY 2020

AN ELEMENT OF THE HIGHWAY INFRASTRUCTURE ASSET MANAGEMENT SYSTEM

Document Information

Title	Highway Infrastructure Asset Management Plan for Highways
Author:	Teri Ford/Bronwen Terry
Reviewed:	Glyn Dutton

Document Issue Status

TABLE OF AMENDMENTS					
NO	**APPROVAL DATE**	**SECTION**	**PARAGRAPH**	**DETAILS**	**AUTHOR**
0	xx/xx/20xx	All	All	First Issue	

Contents

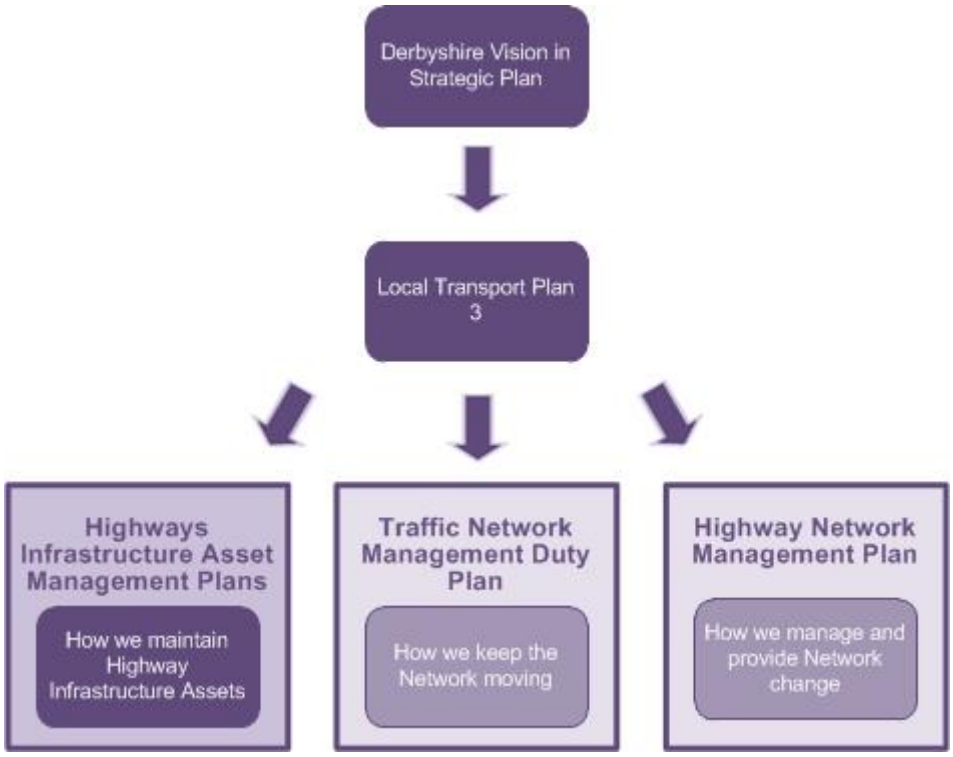
1. INTRODUCTION

This document provides the technical details that supports the Highways Infrastructure Asset Management Strategy and Plan and forms part of the Highways Infrastructure Asset Management suite of documents. It is a working document that provides the processes and information used internally by staff undertaking roles in delivery of service.

This document will recognise a number of Development Areas where Derbyshire has recognised potential improvements to the service they deliver. These development areas are aspirations only and will be reviewed on an annual basis to assess whether they are deliverable from a financial and resource perspective. A breakdown of these Development Areas can be found in Appendix A.

The following figure shows this documents context with other key documents in how the network is managed, maintained and changed:

Diagram 1: Plans and Policies Framework



2. SCOPE

This document covers the carriageways, footways, kerbs, road markings, road studs, highway fences and verges on the Derbyshire highway network. However, public rights of way are covered in more detail in the Rights of Way Charter and the Rights of Way Improvement Plan for Derbyshire and the HIAM Rights of Way.

3. ASSET CAUSES OF DETERIORATION

The main causes of carriageway/footway/kerb/road markings/road stud deterioration are itemised below:

Table 1: Assets and causes of deterioration

Asset Type	Cause of Deterioration	Description	Typical Defects
Carriageway/ Footway/ Cycleway	Wear and tear/ageing	Action of vehicular traffic and weathering	Loss of colouration, binder becoming brittle leading to surface aggregate loss and finally to surface failure
	Utility installations/trenching	Loss of structural integrity, settlement, or unevenness due to poor reinstatement	Local settlement, sunken reinstatements and joint failure leading to major cracking and potholing
	Constant vehicle loading in the same line on the carriageway	Plastic deformation in bituminous layers	Wheel track rutting – moderate to deep depressions with mounding to either side typically 300mm to 400mm wide
	Water ingress	Saturation of subgrade and subbase, in extreme cases causing pumping in surfacing layers	Wash out of fines from formation layers, voids, cracking, crazing, potholes
	Edge deterioration	Non-kerbed carriageways offer little or no edge restraint	Rutting in verges adjacent to carriageway, cracking and loss of material
	Spalling in cementitious materials	Surface breaks up in layers or small pieces	Potholes in concrete, exposed joints
	Differential settlement in concrete slab	Typically a concrete slab will fail and sink below the level of the adjacent bay	Stepping between slabs, exposed and damaged joints
	Loss of skid resistance	Polishing of surface course by vehicle action, loss of aggregate, fatting up of bitumen	Slippery surface with low resistance to skidding/low texture depth.
	Depressions and/or inadequate drainage	Ponding	Areas of standing water on the carriageway leading to accidents and deterioration of the surface course
	Oxidisation of bitumen causes it to become brittle, resulting in loss of aggregate from the surface course	Fretting of bituminous materials	Potholes, loose material on the surface, loss of skid resistance
	Damage by vegetation	Tree roots and weeds causing uneven surface	Cracked and depressed flags. Linear cracking of

			bituminous layers along root line, leading to potholes and surface failure. Overgrowth of weeds on top of bituminous surfacing
	Structural landslips, sinkholes and subsidence	Provided in the HIAM Part 2 for Structures	Provided in the HIAM Part 2 for Structures
	Theft	Theft of manhole and gully covers and stone flags	Missing manhole and gully covers and stone flags
	Underuse	Carriageways which have very low traffic volumes	Weed growth, verge encroachment, deterioration of surface course as soil and detritus accumulates
Road Markings/ Road Studs	Wear/ageing road markings	Action of vehicular traffic and weathering	Markings become faint and loose reflectivity
	Utility installations/ trenching	Excavation by utilities with poor reinstatement/no replacement of lines/studs	Loss of marking or stud
	Loss of skid resistance	Action of vehicular traffic	Road markings can become slippery for cyclists and motor cyclists
	Road stud wear	Action of vehicular traffic and weathering	Loss or damage to stud
	Structural landslips, sinkholes and subsidence	Provided in the HIAM Part 2 for Structures	Provided in the HIAM Part 2 for Structures
	Theft	Theft of road studs	Missing road studs
	Loss of aggregate/ thermoplastic in coloured surfacings	Action of vehicular traffic, weathering	Bare patches, loss of colour
Kerbs	Vehicle/accident impact	Severely damaged kerbs in a specific location	Broken or sunken kerbs
	Constant vehicle override	Failing concrete kerb race	Kerb misalignment vertically or horizontally
	Wear and tear and ageing	Ageing and general wear and tear can cause deterioration of kerbs	Spalling and loss of aggregate in concrete kerbs. Brittleness in plastic kerbs
	Utility installations	Loss of structural integrity, settlement, or unevenness due to poor reinstatement	Local settlement broken or badly chipped kerbs
	Damage by vegetation	Tree roots and weeds causing kerb lines to be uneven	Misaligned or sunken kerbs, leading to potholes on footways and surface failure. Overgrowth of weeds on top of kerbs

	Structural landslips, sinkholes and subsidence	Provided in the HIAM Part 2 for Structures	Provided in the HIAM Part 2 for Structures
	Theft	Theft of kerbstones	Missing kerbstones
Grass Verges	Constant vehicle override	Rutting of the verge below the level of the carriageway	Edge deterioration and excess mud
	Structural landslips, sinkholes and subsidence	Provided in the HIAM Part 2 for Structures	Provided in the HIAM Part 2 for Structures
	Damaged by vegetation/infestation	Verges overgrown	Verges overgrown leading to obscured visibility

4. NATIONAL/LOCAL GUIDANCE AND RELATED DOCUMENTS

The maintenance of the highway is governed by a series of national/local documents and guidance including:

- Well-managed Highway Infrastructure: A Code of Practice 2016
- DFT Potholes A Repair Guide March 2019
- HMEP: The Potholes Review (first published by HMEP in April 2012) and subsequent associated guidance
- Derbyshire County Council Highway Infrastructure Assets Safety Inspection Manual
- Derbyshire County Council Reactive Maintenance Teams Operational Manual

These documents are stored on the Derbyshire website, relevant internet site for external documents and EDRM. Links are provided above.

This document is a live document that will be reviewed biannually or whenever a significant change is required to any of the processes or procedures documented within it.

5. LEVELS OF SERVICE AND CRITICAL ASSET IDENTIFICATION

The Highways Infrastructure Asset Management Policy, Strategy and Plan have developed and documented the overarching Levels of Service derived from the authority's statutory duties, the national and regional guidance, the management and mitigation of risk both to the service user and the authority and the volume and type of traffic using the network

The Levels of Service that define the Council's approach to the management of the highway assets have been defined against the Network Hierarchy and the Resilient Network. These can be found online here. There are two levels of service in regards to safety on the network due to budgetary constraints. Levels of Service will be reviewed and amended regularly to take into account the budgetary position. The critical assets are defined as those on the resilient network. The table below shows how the two levels of service relate to the network levels.

Table 2: Carriageways and on-road cycleways assets and levels of service

	Resilient Network and Critical Assets (9% of total network)	Network Hierarchies 1 to 7 inclusive (91% of total network)
	Level of Service 1	Level of Service 2
	Safety + Serviceability + Sustainability + Customer Service	Provision of safety related issues and Customer Service only
Objective	Comply with statutory obligations and to provide Network Safety and customer service RN to be prioritised to ensure availability and minimise costs where budgets allow	Comply with statutory obligations and to provide Network Safety and customer service
Standard	Comply with Code of Practice and apply asset management techniques to optimise whole life costs.	Comply with Code of Practice and apply asset management techniques to optimise whole life costs.
Impact/ Risks/ What it means	Programme of inspections and determination of condition. Lifecycle planning leading to 3-10 year forward programme with prioritised annual programming. Predominantly reactive maintenance Minimal intervention to prevent asset deterioration Safety inspections and identified safety defects prioritised according to risk based approach. Likely increase in non-safety defects with potential for increase in third party insurance claims. A total of 99.86% of the resilient network is salted. This includes: Primary routes: 98.2%, Secondary routes: 0.76% Salted externally: 0.89%	Programme of inspections and determination of condition Lifecycle planning leading to 3-10 year forward programme with prioritised annual programming. Predominantly reactive maintenance Minimal intervention to prevent asset deterioration Safety inspections and identified safety defects prioritised according to risk based approach. Likely increase in non-safety defects with potential for increase in third party insurance claims. A total of 50.9% the network hierarchy is salted. This includes: Primary routes: 31.3% Secondary Routes: 15% Tertiary Routes: 4.5% Salted externally: 0.1%

Table 3: Footways and segregated cycleways assets and levels of service

	Footway Hierarchy 1 and 1A (9% of total network)	Network Hierarchies 1 to 7 inclusive (91% of total network)
	Level of Service 1	**Level of Service 2**
	Safety + Serviceability + Sustainability + Customer Service	**Provision of safety related issues and Customer Service only**
Objective	Comply with statutory obligations and to provide Network Safety and customer service RN and 1/1a to be prioritised to ensure availability and minimise costs where budgets allow	Comply with statutory obligations and to provide Network Safety and customer service
Standard	Comply with Code of Practice and apply asset management techniques to optimise whole life costs.	Comply with Code of Practice and apply asset management techniques to optimise whole life costs.
Impact/ Risks/ What it means	Programme of inspections and determination of condition Lifecycle planning leading to 3-10 year forward programme with prioritised annual programming. Predominantly reactive maintenance Minimal intervention to prevent asset deterioration Safety inspections and identified safety defects prioritised according to risk based approach. Officer observations and all other non-safety repair requests risk assessed and where possible added to the programme to be dealt with in accordance with the timescales set out in the HIAMP. Reactive salting only for winter service.	Programme of inspections and determination of condition Lifecycle planning leading to 3-10 year forward programme with prioritised annual programming. Predominantly reactive maintenance Minimal intervention to prevent asset deterioration Safety inspections and identified safety defects prioritised according to risk based approach. Likely increase in non-safety defects with potential for increase in third party insurance claims.

Adopted Cycleways Assets and Levels of Service

Adopted cycleways will adopt the level of service associated with the asset they sit on. For example, if the cycleway is on the carriageway it will have the same levels of service associated with carriageways. See Table 2.

Table 4: Kerbs/road markings/road studs assets and levels of services

	Resilient Network and Critical Assets (9% of total network)	Network Hierarchies 1 to 7 inclusive (91% of total network)
	Level of Service 1	Level of Service 2
	Safety + Serviceability + Sustainability + Customer Service	Provision of safety related issues and Customer Service only
Objective	Comply with statutory obligations and to provide Network Safety and customer service RN to be prioritised to ensure availability and minimise costs where budgets allow	Comply with statutory obligations and to provide Network Safety and customer service
Standard	Comply with Code of Practice and apply asset management techniques to optimise whole life costs.	Provision of reactive based approach to maintenance only.
Impact/ Risks/ What it means	Safety inspections and identified safety defects prioritised according to risk based approach. **Road Markings:** Officer observations and all other non-safety repair requests risk assessed and where possible added to the programme to be dealt with in accordance with the timescales set out in the HIAMP. **Road Studs/Kerbs:** Comply with statutory obligations and to provide Network Safety. Predominantly reactive maintenance with only safety issues addressed Likely increase in non-safety defects with potential for increase in third party insurance claims	Programme of inspections and determination of condition Lifecycle planning leading to 3-10 year forward programme with prioritised annual programming. Predominantly reactive maintenance Minimal intervention to prevent asset deterioration Safety inspections and identified safety defects prioritised according to risk based approach. Likely increase in non-safety defects with potential for increase in third party insurance claims.

DEVELOPMENT AREA 1: Service Level Agreement

Most grass verges are maintained by district councils on behalf of Derbyshire agency agreements. Service Level Agreements to be developed with agents outlining expected levels of service.

6. IDENTIFICATION OF NEW ASSETS – DATA CAPTURE

The following table highlights the ongoing process with regard to identifying new assets:

Table 5: Process for identifying new assets

Asset Type	Resilient Network & Critical Assets Level of Service 1	Network Hierarchy 1 – 7 inclusive Level of Service 2
Carriageway	See Development Area 2 ,4,5 and 6	See Development Area 3,4,5 and 6
Footway		
Kerbs	Derbyshire are not going to be doing an initial video capture for kerbs as we have about 95% of the network mapped already.	
Road Markings	See Development Area 2 and this data is also held in Park Map	See Development Area 3 and this data is also held in Park Map
Road Studs	See Development Area 2	See Development Area 3
Rural Paths	New assets are identified by GIS asset capture.	
Verges	There is a need to capture this asset information. Strategy and Network Planning will meet with agencies to collect this data. Currently we have some agency information but others hold their data remotely. Prioritisation of data capture will be on the Resilient Network. The data capture needs to also include weed killing and a memo of understanding for all visibility splays.	

7. INVENTORY UPDATE AND ASSET CAPTURE

DEVELOPMENT AREA 2: Update Inventory on Resilient Network

Complete driven asset capture survey of resilient network by end of March 2020 (Highway Strategy). The process is in Appendix B.

DEVELOPMENT AREA 3: Update Inventory on Network Hierarchy

Complete driven asset capture survey of network hierarchy. The process in Appendix B.

8. AS-BUILTS PROCESS AND DATA CAPTURE

Development Control Process

Where new assets are provided through the development control/planning process, the as-builts are to be provided by the developer and sent to each asset owner, who is responsible for entering them onto the Single Asset Management System as detailed in the Quality Management System. If the number of assets is small in number then this task is to be completed by the asset owner, however if the number of assets to be added is likely to be significant then this data capture process will be completed by the

Highway Strategy team using the driven asset capture survey. See Appendix B for the detailed process. It is the asset owner's decision as to which process is to be adopted, if it is the latter process, then development control will include this item in the brief for the developer to contribute to the cost.

DEVELOPMENT AREA 4: Development Control Process

The Development Control process needs to ensure that developer schemes (S278 and S38) should produce an as built drawing which is checked by the Clerk of Works in construction and then sent to the asset owner for them to input. This task will be carried out by 1 person to complete all assets at the same time which is funded by developer control budget. Discussion with Development Control needs to occur to establish if fees need to be increased to cover this additional cost and to ensure the as built output meets the requirements of CONFIRM.

Internal Capital Schemes

Where new assets are provided by the internal design and construction services, the design brief is to include the production of an as-built/photograph of each new asset to the asset owner as detailed in the Quality Management System. If the number of new assets is small in number then the necessary update to the asset management system is to be completed by the asset owner, however if the number of new assets to be added to the database is likely to be significant then this data capture process will be completed by the Highway Strategy team using the driven asset capture survey. See Appendix B for the detailed process. It is the asset owner's decision as to which process is to be adopted. However, if it is to be the latter process, then a percentage of the overall scheme cost is to be allocated to the capital scheme to complete this task.

DEVELOPMENT AREA 5: Update Inventory – Internal Capital Schemes

This process needs developing and implementing.

Internal Revenue Schemes

Where ad-hoc new assets are provided by the asset owners' design team and internal construction services, it is the responsibility of the construction service team or the design team to provide the asset owner with an as built drawing and photo of the completed work so that the asset owner can update the asset database accordingly.

DEVELOPMENT AREA 6: Update Inventory – Internal Revenue Schemes

This process needs developing and implementing.

DEVELOPMENT AREA 7: Amending the Mapping Layers

Creating a Single Base Network

There are currently a number of digital networks employed to attach asset and condition information. To rationalise our approach and to reduce inconsistencies between digital layers, we intend to create a single base network to satisfy this requirement.

9. INSPECTIONS AND SURVEYS

Highway inspections include inspections through either visual or mechanical forms of survey. Highway inspections are conducted to either maintain a safe network, or to establish the condition of the assets within the network.

There are currently no specific condition inspections undertaken for kerbs, white lining and road studs and these are inspected as part of routine safety inspections.

Routine Surveillance

Safety inspections are designed to identify, assess, record and prioritise the repair of identified defects which may present an immediate danger or significant inconvenience to users of the highway. Information related to completing safety inspections and the risk based approach to defect assessment and repair are detailed in the Highway Infrastructure Asset Safety Inspections Manual. The process map for inspections can be found in Appendix B.

Annual Engineers Inspection (AEI)

The Annual Engineer's Inspection (AEI) survey is the County Council's preferred choice of visual survey of carriageways and footways providing essential data on condition to maximise the effectiveness of the highway maintenance programmes of work.

The AEI gathers the surface condition visually and records it through a treatments option list (see Table 7 below). The AEI reports the carriageway condition, including those cycleways located within the carriageway through a Pavement Condition Index (PCI) and the information is expressed as the percentage of roads reported as "Need Maintenance Now" for Resurfacing/ Reconstruction/Surface Dressing. This includes any locations with high friction surfacing.

A separate AEI for the footway reports the footway condition, including those of footways that have shared use with cycleways through a Footway Condition Index (FCI) and as with the PCI the information is expressed as a percentage of footways reported as "Need Maintenance Now" for Resurfacing/Reconstruction.

These surveys are either conducted by in-house surveyors or awarded to Contractors via Tender and executed to prescribed instructions, alongside a prescribed method of audit.

The UK Roads Board (UKRB) has approved the AEI survey as a method for establishing road condition, however it would not be accredited to UKPMS as it is a bespoke survey unique to each authority. Although this survey is not specified as accredited by UKPMS it is audited and can therefore be used.

We are working towards transitioning from the current survey timetable which prioritises the A and B roads to prioritising those that are on the RN and are developing a risk based approach for the remaining routes according to the NH. The AEI survey is completed on a five year cycle. The current survey timetable is shown in Table 6.

Table 6: AEI survey timetable

Location	Survey Type	Class	Network Cycle	Survey Network Details	Season / Cycle
Carriageway/ On road cycleway	AEI (Annual Engineers Inspection) visual survey	A, B, C & U roads	5 years	100% A & B roads pa 20% C & U roads pa Plus the 3 - 5 yrs treatments suggestions for 'Surface Treatment' & 'Resurface' identified in the previous year's survey	Spring
Footway/ Segregated cycleway	AEI (Annual Engineers Inspection) visual survey	Methodology currently under review while Derbyshire carry out their initial footway asset capture.			

The Treatments listed in Table 7 have been categorised as part of the AEI assessment and can be easily edited or updated, if required, based on local rules and needs. The AEI Treatments Options List (detailed in Table 7) has been agreed by Highways Maintenance Section, the Laboratory and Asset Management Section with advice from the asset management software provider.

Table 7: Treatment options list

Treatments Options List	
As New	Maintenance Patch
Up to Standard	Patching (Machine Laid)
Surface Dress 10/6 Racked in	Concrete Repairs
Surface Dress 6mm	Joint Repairs
Surface Dress with <10% Patch	Micro Asphalt
Surface Dress with >10% Patch	Micro Asphalt >10% Patch
Surface Dress with >20% Patch	Preventative Treatment 3 – 5 Years
Surface Dressing Remedial Works	Reconstruction
Edge Haunch	Resurface + Binder
Edge Haunch + Surface Dressing	Resurface
HFS	Resurface 3 – 5 Years
Overband Sealing	Track - Unmade
Junction Deterioration	Not Present

Sideways Force Coefficient Routine Investigation Machine (SCRIM)

The County Council's Skid Policy is currently informed using the SCRIM survey. The machine is a surface friction tester which accurately measures skidding resistance under constant load and at a constant speed on a wet road. It makes continuous measurements following a single line, typically along the inside wheel path and it provides survey data at ten metres intervals. Roads are tested in both directions unless the road layout dictates otherwise and on multi-lane roads, measurements are taken in lane one.

The SCRIM sites are processed and stored in county council's asset management software systems. The County Council's skid policy is then applied which prioritises sites below investigatory level against the previous three year's relevant collision data. This then produces a list of sites requiring further investigation.

The Skid Policy has been reviewed based on the guidance within the Road Surface Treatments Association document Guidance on Road Skid Resistance Policy/Strategy. High Friction Surface Treatments are also measured as part of the SCRIM Survey (where they are present on the relevant hierarchy).

The SCRIM survey is delivered by external contractor through a tender process and the SCRIM survey Technical Note is available using the following link: http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol7/section3/hd2815.pdf

The SCRIM survey covers Network Hierarchies 1 to 4 and also any remaining A or B roads outside of these hierarchies. These remaining roads have been retained until it is felt that the public are more informed about the new risk based approach, of which traffic usage hierarchies is fundamental, rather than the more traditional network of A, B, C and Unclassified roads.

As this public awareness is increased the survey network will be refined further to reflect the new hierarchies with the removal of any road not contained within the relevant category.

Derbyshire has adopted the Single Annual Skid Survey method for SCRIM surveys. This means that surveys are rotated in an early, mid and late season sequence and three years of survey results are used to provide Seasonal Variation Correction. The survey timetable is outlined in Table 8 below:

Table 8: Scrim survey timetable

Survey Type	Class	Network Cycle	Survey Network Details	Season / Cycle
SCRIM Survey	Hierarchy 1, 2, 3 & 4 and any remaining A or B roads	3 years	Hierarchy 1, 2, 3 & 4 and any remaining A & B Roads 100% both ways per annum	Year 1 - Late Year 2 - Mid Year 3 - Early

Skidding Resistance Investigatory Levels

Investigatory Levels are set using the process set out in Chapter 6 of the County Council's Skid Policy. Once established these Investigatory Levels will be reviewed every 3 years as outlined in the Skid Policy and any necessary changes will be implemented.

DEVELOPMENT AREA 8: Explore Correlation Between Various Methods of Measuring Skidding Resistance

Explore other methods of measuring skidding resistance, in conjunction with the County Council's Highways' Laboratory, to establish a correlation between them.

Deflectograph Surveys

Deflectograph is a technical survey that predicts the residual life of a road based on the deflection of the road surface under a given load, allied with the type and depth of construction and estimated axle loading.

The Deflectograph survey is completed on a five year cycle on the A Road network and sections of the B, C and unclassified networks on maintenance hierarchies 1 and 2. The current survey timetable is shown in Table 9.

Table 9: Deflectograph Survey Timetable

Survey Type	Class	Network Cycle	Survey Network Details	Season / Cycle
Deflectograph Survey	20% A roads Plus parts of B,C & U roads	5 years	20% A roads per annum in the forward direction plus parts of the B,C & U roads that fall into the Resilient Network and Hierarchies NH1 & NH2	Spring 1 March to 15 June or Autumn 16 Sept to 30 Nov

DEVELOPMENT AREA 9: Review of Deflectograph Survey

Deflectograph Survey to be reviewed as a condition survey due to the limited network coverage in light of the use of the AEI survey on the whole network and potential future technical advances.

Night-time Reflectivity

DEVELOPMENT AREA 10: Night-time Safety Inspection

Derbyshire do not currently carry out night-time inspections to assess the reflectivity condition of both road studs and road markings due to financial constraints. Consideration may be given to carrying out these inspections if the financial situation improves in the future.

Pre Scheme Coring Survey

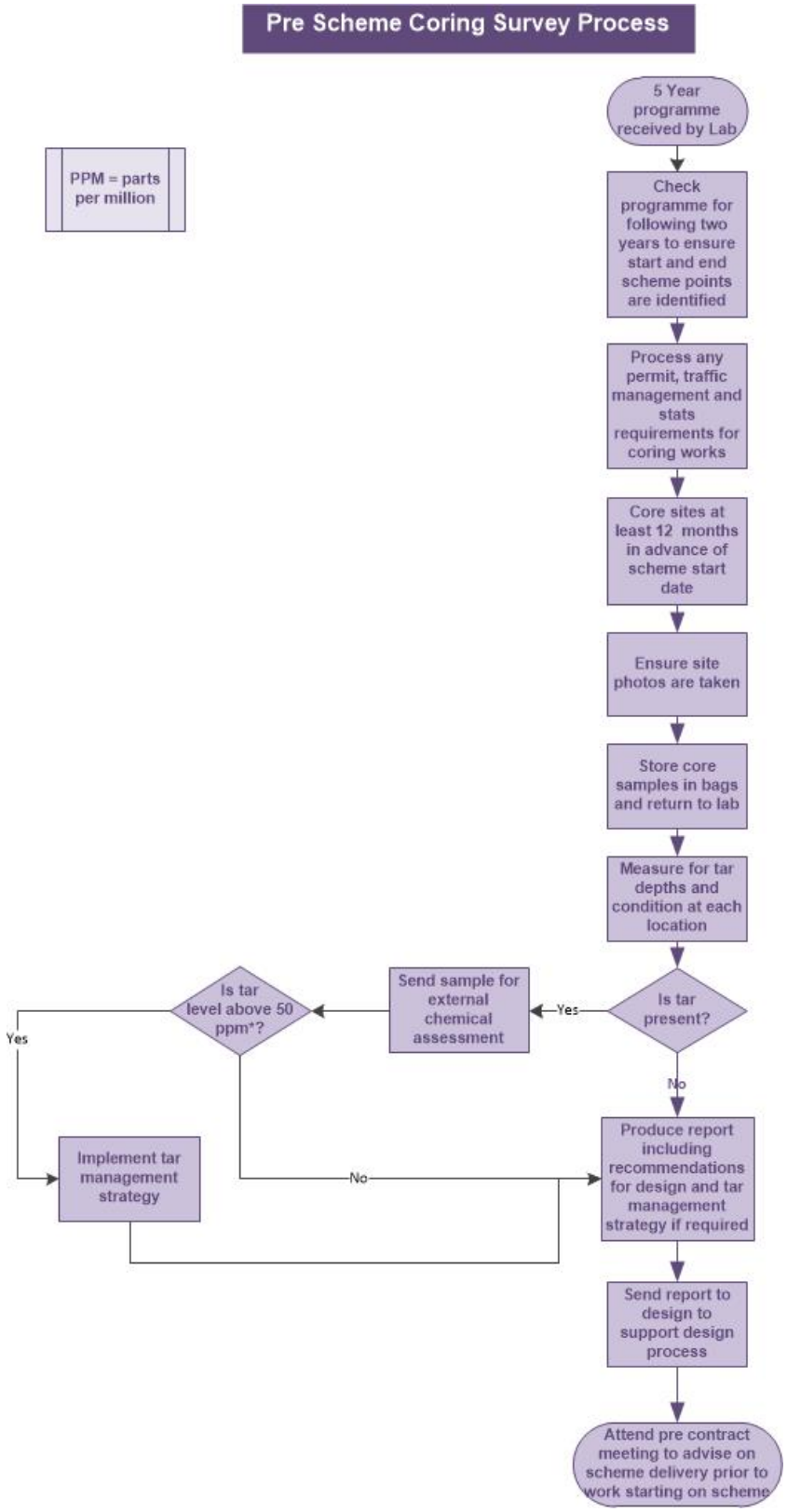
Pre scheme coring surveys are carried out on all schemes identified on the 5 year forward programme barring surface dressing schemes. They are carried out ideally 12 month prior to the planned start date of a scheme. The purpose of these surveys is to identify the presence of tar under the surface of the road and assess the general condition of the road. The information gathered during a survey is used to produce a report which will advise the design team on the most efficient way to design a scheme. If tar is found to be above 50 ppm (parts per million) then a tar management strategy will be required.

Coring surveys involve the use of a coring machine which will take samples of the road at varying intervals as follows:

a. Every 250 metres, or;
b. Where there is a variation in the road surface, or;
c. Either side of an existing joint in the road, or;
d. Where there is a site specific issue for example, a trench in poor condition.

The process below shows how pre scheme coring surveys are carried out:

Diagram 2: Pre Scheme Coring Survey Process



10. ASSET CONDITION AND ASSESSMENT

The County Council's Confirm Pavement Management System is a computer based software produced to the national standard known as UK Pavement Management System (UKPMS).

It breaks down the highway network into individual section lengths which hold a range of information about the highway asset including some inventory data, condition data and results of inspections.

The system also has the functionality to issue electronic works orders directly to the contractor and provides a customer services module to accurately log and position service enquiries to assist in the efficient response to service requests.

In conjunction with the PMS the Council also uses an asset management software system. This also uses the same network as in the PMS but has more detailed condition survey data attached to it (AEI, SCRIM, Deflectograph).

In addition to the technical surveys, the asset management software has been programmed with deterioration models and treatment lifecycles and it can predict the current and future maintenance need of the highway asset, works backlog calculation and allows decisions for highway maintenance investments and suggestions for future works based on a structured and consistent basis.

Also bids, through the LTP and APR processes, to the Department for Transport (DfT) for Local Transport Capital Finance are made using supporting data from the PMS.

Derbyshire anticipates that UKPMS will form an integral part of highway management arrangements. In particular, the Council expects UKPMS to deliver the following:

- Best Value performance indicators;
- Local budget setting and needs identification;
- Local performance indicators;
- Road condition information to support the LTP;
- Comparable information to benchmark with others;
- Local identification and prioritisation of treatments.

11. LIFE CYCLE PLANNING

Life Cycle Planning is part of an effective asset management process as it identifies maintenance need over the life of the asset and provides an overall maintenance backlog.

In 2017, the 22 member Authorities of the MSIG (Midlands Service Improvement Group) agreed that a specific asset management software system provider would work with MSIG to produce a Framework document for Life Cycle Planning.

Derbyshire County Council was a main contributor to the process. The resulting document was accepted by the MSIG in October 2017 as their High Level Life Cycle Planning Framework document.

Treatment Baskets for Lifecycle Planning

The MSIG Authorities use the following “baskets” of treatments

- Basket A - Planned Works Structural Intervention – These treatments are sometimes classed as reconstruct;
- Basket B - Planned Works Major Intervention – These treatments are sometimes classed as resurfacing;
- Basket C – Preventative Maintenance Works – These are generally associated with surface treatments like surface dressing, micro-asphalts or patching;
- Basket D – Reactive Maintenance – These treatments are generally associated with emergency works to ensure that the road is safe for its users.

Derbyshire has used this as a basis for its lifecycle planning development.

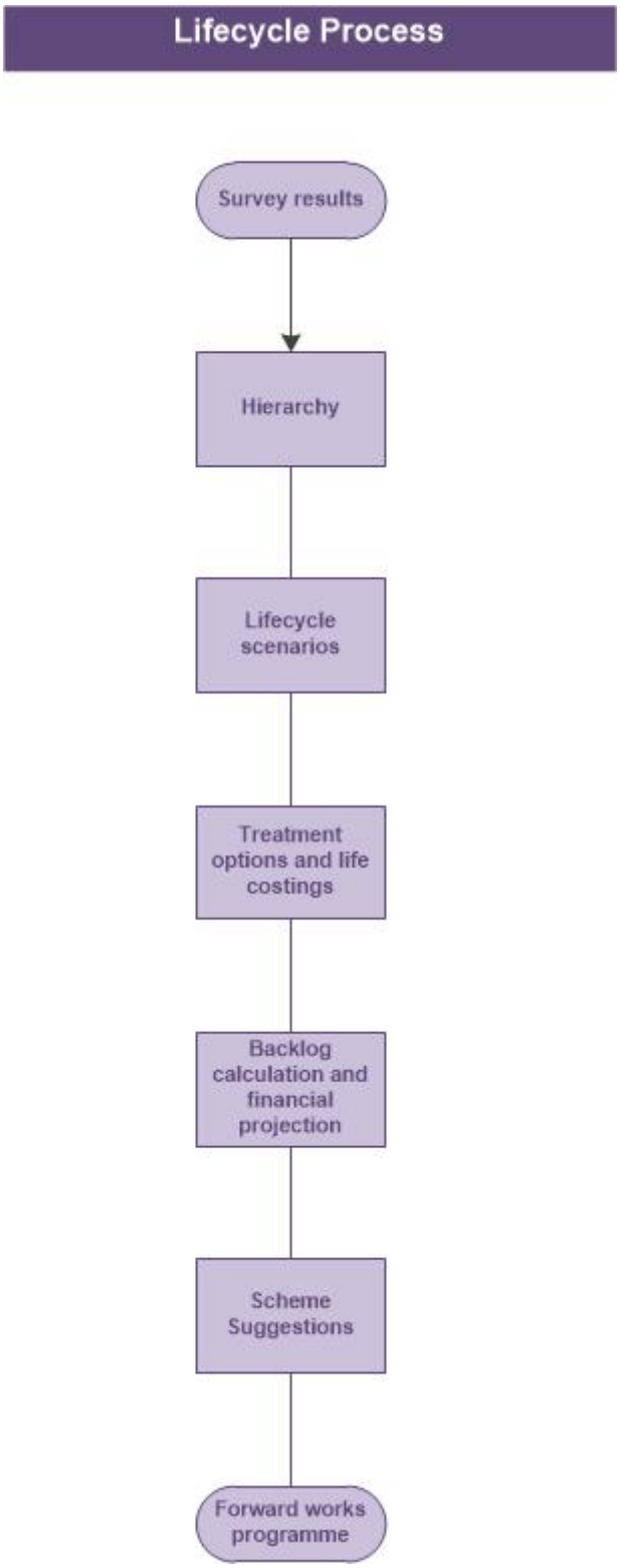
Key Principles

Derbyshire County Council identified the following key principles as required for providing a robust Life Cycle Planning system:

- Network Hierarchy
- Survey Regimes
- Treatment Options
- Treatment Costs
- Treatment Lives
- Life Cycle Options
- Baskets of Treatments
- Allocation Life Cycle Positioning
- Life Cycle Scenarios
- Backlog and Maintenance Need calculations

The lifecycle process is shown in the process overleaf:

Diagram 3: Lifecycle Process



Carriageways

As discussed above, the AEI treatments listed in Table 7 have been categorised as part of the AEI assessment and can be easily edited or updated, if required, based on local rules and needs.

Treatment Costs

In order to provide accurate treatment cost projections to inform the life cycle planning process and scheme estimates, the County Council has developed unit rates for each maintenance treatment. These are programmed into the County Council's asset management software and produce the figures for maintenance need and works backlog.

The unit rates are based on a total price per square metre specific to each treatment type and is inclusive of works and design costs.

For budgeting purposes treatments can be classified as either Preventative or Structural. Preventive treatments are processes to prolong the life of a road surface such as surface dressing, micro-asphalt and patching and structural treatments tend to be treatments where a road is at the end of its life, such as resurfacing or reconstruction.

Treatment Life in Years

To accurately life cycle plan the highway asset, it is necessary to know how long a material will last in a given location. A table detailing expected Materials Life in years has been developed and approved, based on the historic performance of each material in Derbyshire and lists Maintenance Hierarchy, Treatment Type and the Expected Lifecycle of Treatment by material type.

Footways

DEVELOPMENT AREA 11: Footway Life Cycle Planning

Once the footway inventory is completed and condition survey undertaken an agreed processing procedure will be implemented.

Kerbs/Road Markings/Road Studs

Currently there is no lifecycle planning undertaken for any of these assets. All defects are reported and resolved through the safety inspection process.

Highway Assessment

The highway assessment is driven by the principles and policy of the Highway Infrastructure Asset Strategy and Plan.

The survey data for SCRIM, Deflectograph, and AEI is converted into coloured mapping layers for displaying in Confirm PMS. The colours are determined by the national condition ranges and are generally referred to as the RAG maps (Red/Amber/Green). However, other colours are used where there are more (or less) ranges. These mapping layers enable Scheme Designers to view all of the condition survey data relating to the section they are designing.

Table 10: Current state of the network

DEVELOPMENT AREA 12: Current State of the Network

This will be reported on once the AEI Carriageway Survey has been accredited by the UK Roads Liaison Group (UKRLG).

12. MAINTENANCE PROCESSES

There are three types of maintenance works undertaken:

(a) **Reactive maintenance**, these are unplanned works usually resulting from customer calls or inspections and include works such as repairing of pot-holes, kerb damage, footway slab repairs, etc. Additionally during the winter period salting and snow clearance are carried out as needed. Roundabouts maintenance is also covered by reactive maintenance and this is often carried out by other authorities via sponsorship. Reactive Maintenance Process Maps can be found in the Reactive Maintenance Teams Operational Manual.

(b) **Routine or cyclic maintenance** such as minor road and footway works such as small patching repairs, weed control, renewing road markings, grass cutting (for visibility and safety). Additionally during the winter period salting and snow clearance are carried out on a routine basis. Rural swathing is partly covered by an agency agreement and covers 1 metre mowing annually and a full width every triennially. Winter Service processes will be covered in the Winter Service Plan.

(c) **Planned or programmed works**, this will include resurfacing and reconstruction of roads and footways, including associated drainage, road markings and signs, preventative treatments such as surface dressing and slurry sealing (also known as micro – asphalt). This also includes in-situ recycling which is covered in more detail here.

DEVELOPMENT AREA 13: Development of Planned Works Process Maps

Planned works process maps are currently under review and need to be developed in the future.

Maintenance of Sites of Special Scientific Interest (SSSI) and local specific interest

DEVELOPMENT AREA 14: Creation of Maintenance Plans for SSSI's and Local Specific Interest

There are 12 – 14 sites which meet the SSSI and local specific interest criteria within Derbyshire and each has its own maintenance plan. These included 36 verges that came into Derbyshire's control in 2006 as a result of a cabinet report. Biodiversity stipulates that Derbyshire must legally have written maintenance plans for these assets. These need to be written with the support of Derbyshire's Conservation and Design Team.

DEVELOPMENT AREA 15: Historic and Conservation Factors

Update the Asset Management system to embed the information overleaf for highway assets:

- Historic Structures and Scheduled Monuments information for those assets within each specific curtilage

- World Heritage Site extents
- Conservation Area extents
- Ecological issues
- SSSI information

13. BACKLOG

For carriageways the County Council asset management software has predicted that to maintain our current network we would need £25.9 million per annum. It has also calculated that the current maintenance need in 2019 is £107 million increasing to £376 million in 10 years times if there is no increase in highway funding.

DEVELOPMENT AREA 16: Identifying the Footway Backlog

Recently the Lifecycle Planning process was undertaken which gave Derbyshire the backlog figure for carriageways. When the footway data is received a similar process will provide the backlog for footways. Short term investment financial requirements will be able to be calculated once this process is complete.

14. VALUE MANAGEMENT/ENGINEERING APPROACH

DEVELOPMENT AREA 17: Adopting a Value Management/engineering Approach

Derbyshire would like to adopt a value management approach whereby we take into account the benefits of undertaking maintenance and the risks of not undertaking maintenance which then provides a prioritised list for Value Engineering to ensure we choose the optimal solution to ensure maintenance need is met while reducing waste and inefficiencies.

15. CROSS ASSET CONSIDERATION

When considering financial requirements Derbyshire will consider allocating budget to those assets that require more financial input regardless of where the money was originally allocated.

16. FORWARD PROGRAMME

By developing financial models associated with lifecycle planning, this strategy will enable a 1 – 5, 10 and 15 year forward works ‘strategic’ budget to be identified for all transport assets.

It will also provide clear indications as to the nature of planned maintenance required to maintain the network, as a whole, by considering asset condition and lifecycle costs against the provision of the desired levels of service, and ultimately, deliver the budget and works programme.

The Forward Works Plan is currently focused on the Carriageway asset group, with a developing Footways and Structures Programme. Street lighting is subject to a Light Emitting Diode (LED) replacement programme and other assets are being captured and surveyed to be incorporated over time. The Forward Works Plan will provide a work bank that can be prioritised in the Highways Service Plan within the available budget.

The Forward Works Plan will show the collective works backlog, it shall make clear what level of funding is required to reduce the backlog and provide the agreed Levels of Service. Thus making a better case for additional funding to maintain this vital asset.

The prioritisation of the schemes identified within the forward programme will be determined annually by available budget, condition and risk.

17. ANNUAL PROGRAMME

The first year of the 5 year forward works programme forms the annual programme.

The programme is decided in the previous year for all asset groups and at this point it provides some opportunity for co-ordination of works. The co-ordination of works is carried out at the quarterly New Roads and Street Work Act (NRSWA) co-ordination meeting. This included all relevant utility companies and representatives from Derbyshire. Larger schemes which encompass several asset groups naturally lead to better co-ordination.

18. RISK REGISTER

A risk can be defined as an uncertain event which influences the desired performance of an asset. A risk factor is the produce of the severity of an event and the likelihood of its occurrence. Derbyshire County Council has a well-established risk management process that overarches all service areas.

The risk management process concentrates on four main issues, by applying these risk management principles, the council will be able to more appropriately target resources and to deliver services and projects in a way that ensures the council's overall exposure to risk is minimised.

The following risk register identifies risks and appropriate mitigation measures.

Table 10: Risk register

Risk Level	Identify Risks	Evaluate Risk	Manage Risk
Strategic	Understanding the Asset	The absence of asset information compromises the ability to provide lifecycle planning and consider budgetary allocations	Identify the current state of the network to enable lifecycle planning and budgetary allocation.
	Budget Concerns	The absence of relevant finances will mean highways may deteriorate compromising the road safety of road users and damage the infrastructure surrounding the highway	Budget management and apply for additional funding where feasible Lifecycle planning Budget Management
	Changes to Traffic	Changes to traffic patterns and the usage of road may alter network prioritisation of asset stock	Pre-empt network changes or travel patterns at the design and planning stages
	Climate Change	Climate change can increase deterioration causes, affecting the lifecycle of some assets and their components meaning intervention will be required sooner than expected	Lifecycle planning/inspections to encompass climate predictions

19. COMPETENCY AND TRAINING

Contractors undertaking condition inspections and surveys are required to prove the competency of their vehicles and surveyors by providing Accreditation Certificates and Employee Qualifications annually.

Competency/training of enumerators who will be adding assets to SAMs including an assessment of their condition. This will be addressed as part of Development Area 19.

All inspection procedures, toolbox talks and risk assessments are reviewed, updated and then trained on an annual basis. The departmental code of practice is reviewed on a five yearly basis. In 2019/20 Derbyshire introduced the Highway Inspector Competency Framework (UKRLG) which will enable our inspectors to meet the requirements of the Code of Practice.

All competency and training requirements are summarised within the skills matrix in Appendix C and managed through the Derbyshire County Council MyPlan system.

Identify the appropriate AM competencies for all staff engaged in Highways Infrastructure Management. Require contractors to provide evidence of appropriate competencies.

DEVELOPMENT AREA 18: Enumerator Training

Training will be developed and delivered for key staff to be able to undertake the driven asset capture survey and data capture process.

DEVELOPMENT AREA 19: Creation of the Skills Matrix

Skills matrix needs to be developed which will support the Councils MyPlan system. This will be added to Appendix C.

20. PERFORMANCE MANAGEMENT FRAMEWORK

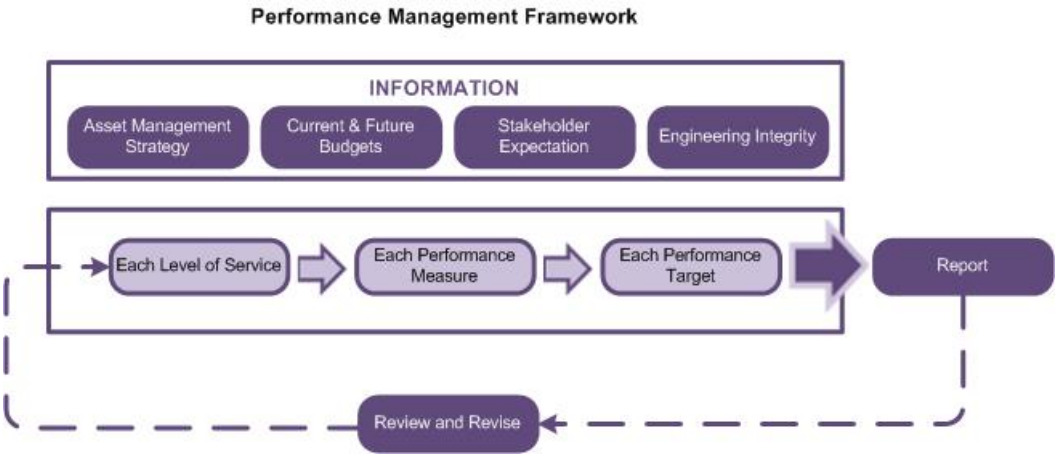
The Performance Framework is used as a tool to inform, measure, review and drive the management and decision-making processes associated with implementing corporate changes and day-to-day decisions relating to the delivery of services, linked to the network hierarchy. The figure below shows the performance management framework.

It is not intended that the Council creates a host of measurements that serve little purpose other than to demonstrate the presence of a framework. At any level, external-facing performance measures should show how well services are being delivered and whether objectives are being achieved.

Internally, a range of input and output measures may be used for monitoring purposes but the key indicators should reflect performance in key service areas to inform senior managers as well as corporate and stakeholders of the service as a whole.

The Performance Management Framework diagram is shown below:

Diagram 4 Performance Management Framework



The table overleaf shows the performance measures and targets for carriageway.

Table 11: Carriageways/on-road cycleways performance measures

Level of Service	Performance Measure	Level of Service 1 Resilient Network	Level of Service 2 Network Hierarchies 1 - 7
		Target	Target
Safety (Highways and Carriageways are classed together so will report identical results)	% of dangerous potholes repaired in target time	100%	
	% of urgent defects repaired in target time	100%	
	% of 32 hour defects repaired in target time	90%	
	% of 9 day defects repaired within target time	90%	
	% of 28 day defects repaired within target time	80%	
	% of network at or below SCRIM intervention	This will be completed once the latest results are released	
	% of safety inspections completed with tolerance levels	100%	90%
Serviceability	% network salted in target time	90%	
Sustainability	Backlog	See Section 13	
	% requested as-builts provided	100%	
	% asset inventory updated	100%	
Customer Service	NHT % of residents satisfied with highway maintenance KBI 24	54%	
	NHT % of residents satisfied with the condition of the highway KBI 23	39%	
	NHT % of residents satisfied with condition of road surfaces HMBI 01	40%	
	NHT % of residents satisfied with the speed of repair to damaged roads and pavements HMBI 07	32%	
	NHT % of residents satisfied with the quality of repair to damaged roads/pavements HMBI 08	40%	

The table below shows the performance measures and targets for footways/shared use cycleways:

Table 12: Footways/shared use cycleways performance measures

Level of Service	Performance Measure	Level of Service 1 Resilient Network	Level of Service 2 Network Hierarchies 1 - 7
		Target	Target
Safety (Highways and Carriageways are classed together so will report identical results)	% of dangerous potholes repaired in target time	100%	
	% of 32 hour defects repaired in target time	90%	
	% of 9 day defects repaired within target time	90%	
	% of 28 day defects repaired within target time	80%	
	% of safety inspections completed with tolerance levels	100%	90%
Sustainability	% as-builts requested and provided	100%	
	% asset inventory updated	100%	
	Backlog	See Development Area 16	
Customer Service	NHT % of residents satisfied with pavement and footpaths KBI 11	57%	

21. COMMUNICATIONS

All information relating to communication is contained with the Highways Communications Plan.

22. CLIMATE CHANGE ADAPTION AND CIVIL EMERGENCIES AND SEVERE WEATHER EMERGENCIES PLANS

All plans relating to this area of work are included on the Derbyshire Prepared website and Derbyshire have taken or are taking action against all of the recommendations raised in the 2009 3 Counties Alliance Partnership The Effects of Climate Change on 3CAP's Highway Network Polices and Standards.

The Severe Weather Plan details Derbyshire's response to weather warnings. This is available internally.

The corporate climate change manifesto can be found here.

As part of the Derbyshire's measures to reduce climate change by reducing our carbon emissions we will continue to monitor how our works impact on the environment. In view of this the Department's preferred method of treatment for reconstructing a worn out road where two or more layers require reconstruction is in-situ recycling.

This is a process which strengthens the condition of a road by reusing the existing worn out structural layers. The process involves planing the existing layers to the required depth and then adding a calculated amount of bitumen to produce new asphalt. The process can be either shallow, approximately 75mm in depth, or deep which is anything deeper than 75mm.

By reusing the existing road construction in this way, the process has the advantages of requiring less lorry movements to and from site and reduces the amount of virgin aggregates being quarried and processed. It also has the added benefit of locking in any tar contamination within the existing road surface without the need to take away for disposal.

Not all sites are suitable to be recycled in this way, either because of the size of the scheme or insufficient depth of the existing construction and therefore other methods of treatment will be considered with a view to reducing the Council's carbon emissions. These other measures could be the use of ex-situ recycling - where road planings are taken away from a site and turned into new asphalt or the use of warm mix asphalt, which is a material that is manufactured at a lower temperature than a conventional asphalt and consequently uses less energy in the process.

23. HERITAGE AND CONSISTENCY WITH CHARACTER

Generic information that will relate to all assets and crosses all HIAM Part 2 documents and therefore are included in the Highway Network Management Plan.

24. CARBON REDUCTION

Generic information that will relate to all assets and crosses all HIAM Part 2 documents and therefore are included in the corporate Carbon Reduction Policy.

25. ENVIRONMENTAL IMPACT, NATURE CONSERVATION AND BIODIVERSITY

Generic information that will relate to all assets and crosses all HIAM Part 2 documents and therefore are included in the Highway Network Management Plan.

26. SUPPLY CHAIN COLLABORATION AND COLLABORATION IN SERVICE DELIVERY

Highways have a number of service level agreements in place with external providers and district councils. These include but are not limited to gully cleansing, white lining and grass cutting.

27. DELIVERY

Delivery is primarily completed through the Derbyshire County Council Construction Services. The construction process is currently under review.

28. PROCUREMENT

Derbyshire use a variety of suppliers according to service need and locality requirements. We have an in-house service provider for construction works and we also use external providers which are sourced via a framework system.

DEVELOPMENT AREA 20: Creating road materials policy

Derbyshire would like to create a Road Materials Policy which states what should be used on different sections of the hierarchy. This should be referenced in all procurement documents.

29. OPERATIONAL POLICIES

Operational Policies are covered in the Highway Network Management Plan.

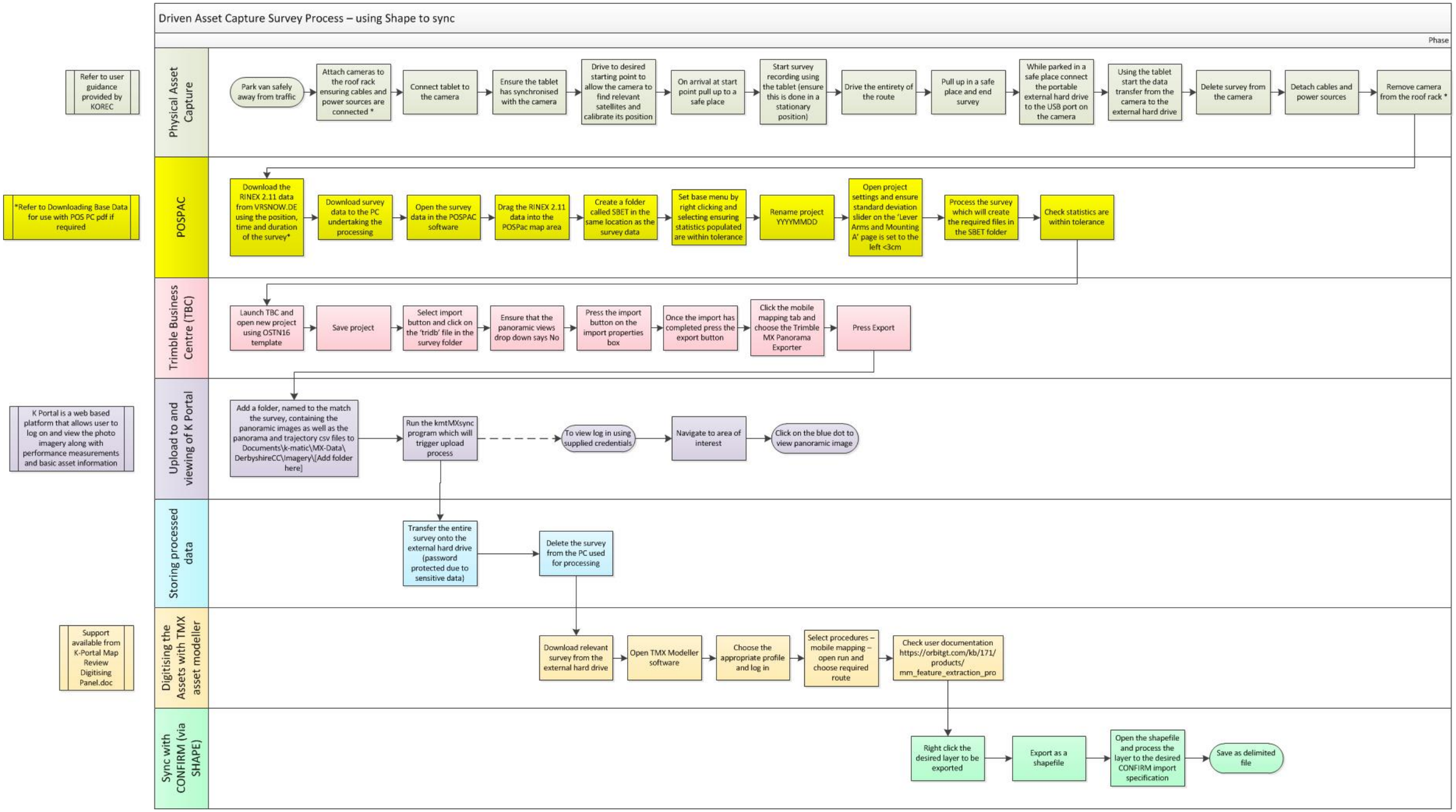
30. APPENDICES

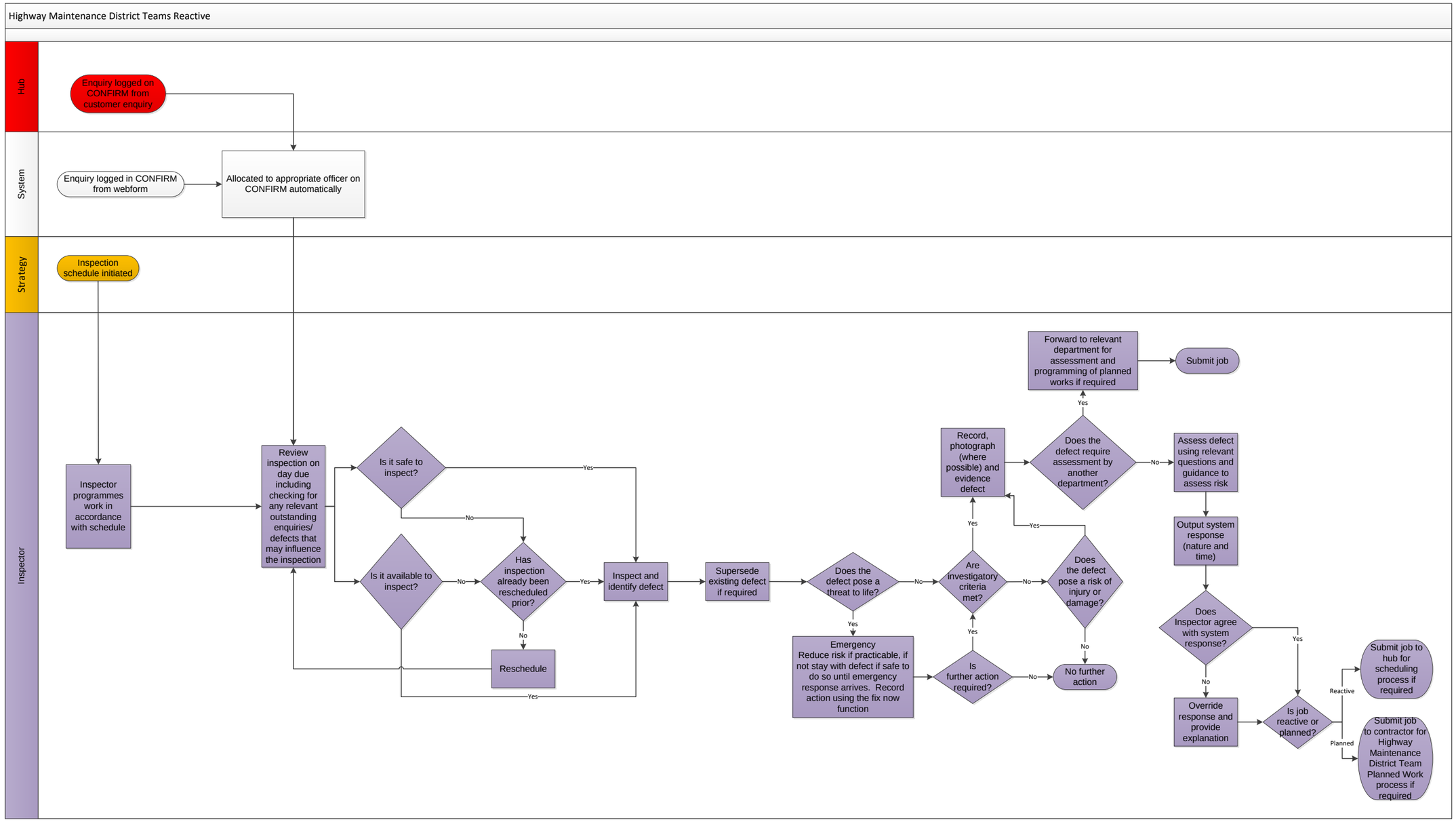
APPENDIX A DEVELOPMENT AREA SUMMARY

Table 13: Development Area Summary

Development Area Number	Development Area Title	Action Taken
1	Service Level Agreements	
2	Update Inventory on Resilient Network	
3	Update Inventory on Network Hierarchy	
4	Development Control Process	
5	Update Inventory Internal Capital Schemes	
6	Update Inventory Internal Revenue Schemes	
7	Amending the mapping layer	
8	Explore correlation between various methods of measuring skidding resistance	
9	Review of Deflectograph Survey	
10	Night time Safety Inspection	
11	Footway life cycle planning	
12	Current State of the Network	
13	Development of Planned Works Process Maps	
14	Creation of maintenance plans for SSSI's and local specific interest	
15	Historic and Conservation Factors	
16	Identifying the footway backlog	
17	Adopting a value management/engineering approach	
18	Training of enumerators	
19	Creation of the skills matrix	
20	Creating road materials policy	

APPENDIX B PROCESSES



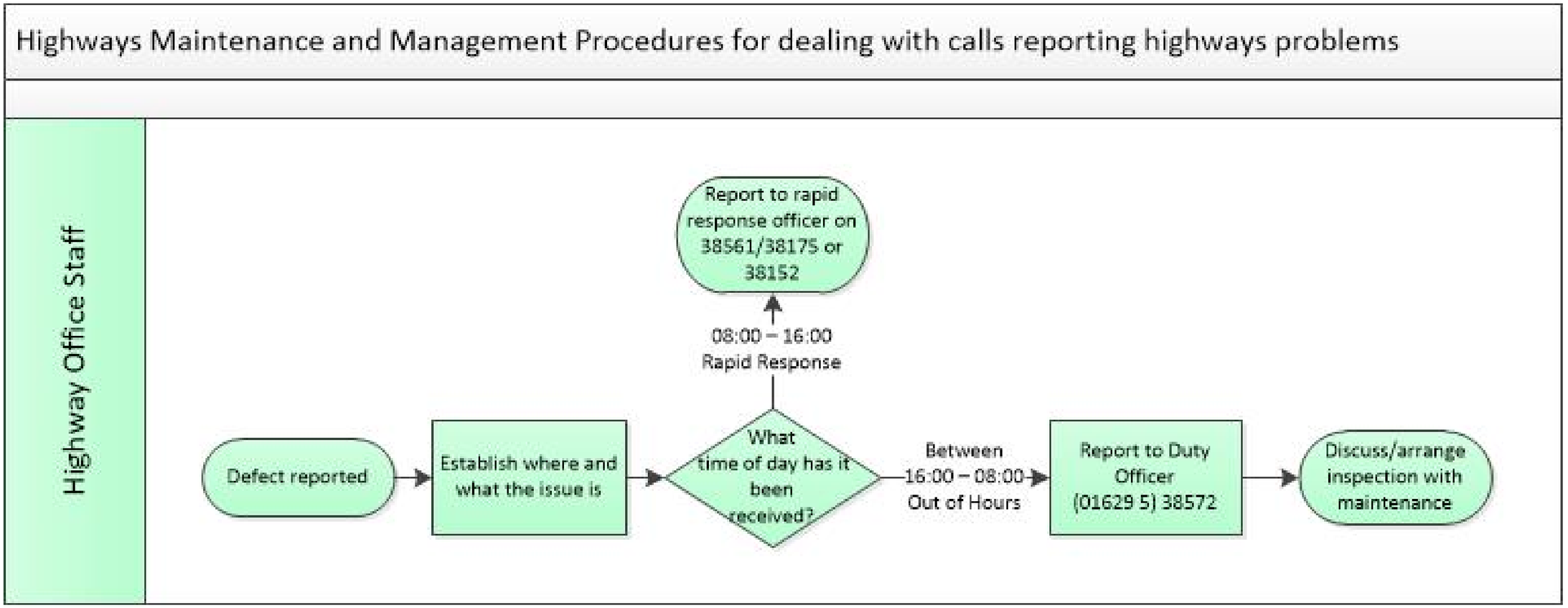


Highways Infrastructure Assets Safety Inspections Manual

All inspection activities to be carried out in accordance with the guidance provided in the above document.

Change Management

If a change to the requirements is identified a change control request (QMS standard form on EDRM) is to be completed in writing. Acceptance or non-acceptance of change must be in writing and recorded on relevant file.



APPENDIX C SKILLS MATRIX

This will be added once Development Area 19 is completed.

HIGHWAY INFRASTRUCTURE ASSET MANAGEMENT PLAN FOR STREET FURNITURE

JANUARY 2020

AN ELEMENT OF THE HIGHWAY INFRASTRUCTURE ASSET MANAGEMENT SYSTEM

Document Information

Title	Highway Infrastructure Asset Management Plan for Street Furniture
Author:	Teri Ford/Bronwen Terry
Reviewed:	Simon Tranter

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TABLE OF AMENDMENTS					
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1	xx/xx/20xx	All	All	First Issue	

Contents

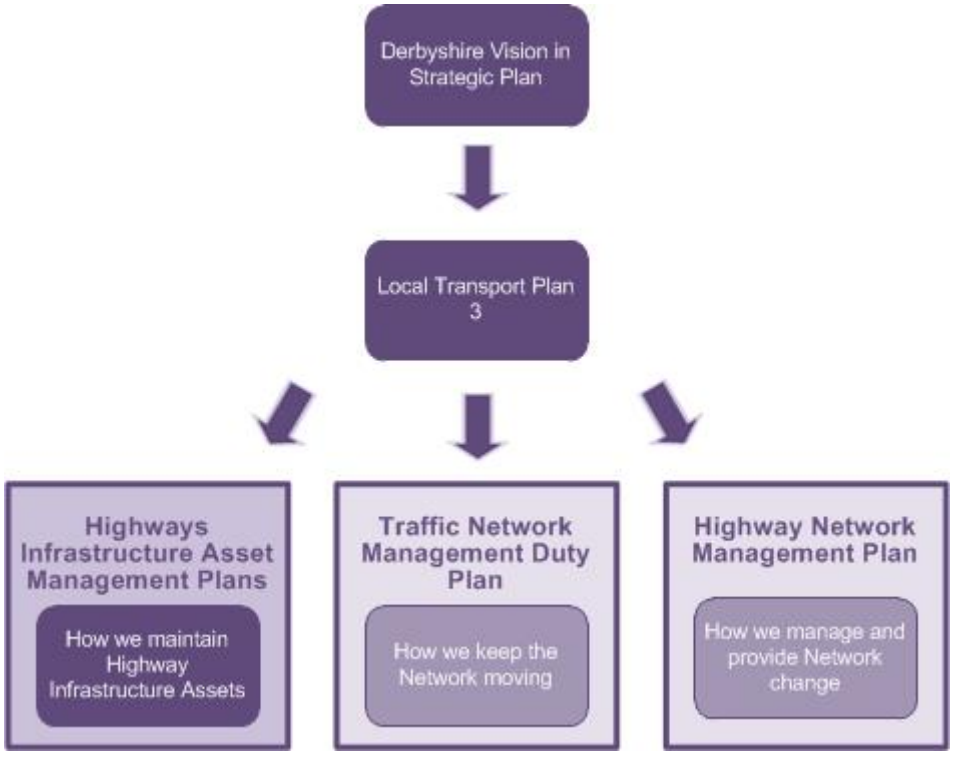
1. INTRODUCTION

This document provides the technical details that supports the Highways Infrastructure Asset Management Strategy and Plan and forms part of the Highways Infrastructure Asset Management suite of documents. It is a working document that provides the processes and information used internally by staff undertaking roles in delivery of service.

This document will recognise a number of Development Areas where Derbyshire has recognised potential improvements to the service they deliver. These development areas are aspirations only and will be reviewed on an annual basis to assess whether they are deliverable from a financial and resource perspective. A breakdown of these Development Areas can be found at the Appendix A.

The following figure shows this document in context with other key documents in how the network is managed, maintained and changed:

Diagram 1: Plans and Policy Framework



2. SCOPE

This document covers the street furniture on the Derbyshire highway network that Derbyshire have a responsibility to maintain. Street furniture items can be categorised into either those that have been provided to improve traffic flow or road safety and those that have not. Street furniture that improves traffic flow or road safety includes traffic calming measures, anti-skid/high friction surfacing, pedestrian restraint systems, non-illuminated traffic signs, non-illuminated bollards and vehicle restraint systems. Other street furniture elements that do not improve traffic flow or road safety include grit bins, benches and tree grates/grills. The Well Managed Highway Infrastructure Code of Practice only provides information on those elements of street furniture which improve traffic flow or road safety, therefore this document only concerns itself with these elements. This document does not

include those street furniture elements maintained by third parties such as District/Parish/ Town councils, local land owners and businesses.

3. ASSET CAUSES OF DETERIORATION

The main causes of street furniture deterioration are itemised below

Table 1: Deterioration and Associated Defects

Asset Type	Cause of Deterioration	Description	Typical Defects
Signs/ Bollards	Trees	Dirt and dust adhere to sign face due to leaf sap and other residues	Illegible, loss of reflectivity
	Lack of cleaning	General dirt and dust accumulation from vehicular traffic	Illegible, loss of reflectivity
	Impact usually vehicle damage	Bending of sign face, disconnection from posts	Destruction or severe impairment of the sign
	Loading	Poor design of posts/wind loading	Leaning of sign and posts/sudden structural failure
	Ageing	Assets approaching end of design life, affected by sunlight	Fading/sign illegible
	Vandalism/ graffiti	Spray painted words, bending of sign face, damage to brackets	Sign illegible
Safety Fencing	Loss of Tension	Bolts and tensioning components loosen over a period of time due to changes in temperature	Fence will not perform as designed under impact; deflection will be greater resulting in more severe injury or damage
	Ageing/ weathering	Metal components will rust over a long period of time	Corrosion of fixings and beams and posts
	Minor vehicle impact	Lesser impacts may not be recorded and therefore not repaired	Damaged beams, loose fixings, displaced post foundations
	Vegetation growth	Summer growth of bushes and trees in front or to the rear of the fencing	Fence will not perform as designed under impact, working widths may be compromised
	Ageing of anchor blocks, posts and foundations	Anchor splitting, post erosion and soil erosion of driven posts	Fence will not perform as designed under impact; deflection will be greater resulting in more severe injury or damage

4. NATIONAL/LOCAL GUIDANCE AND RELATED DOCUMENTS

The maintenance of street furniture is governed by a series of national/local documents and guidance including those items below:

- Well-managed Highway Infrastructure: A Code of Practice 2016
- Traffic Signs Manuals
- Traffic Signs, Regulations and General Directions 2016
- Design and Maintenance Guidance for Local Authority Roads: Provision of Road Restraint Systems for Local Authorities
- Road Restraint Risk Assessment Process and TD19 Requirement for Road Restraint Systems
- Relevant Local Traffic Note
- Derbyshire County Council Highway Signs Environmental Code of Practice
- Derbyshire County Council Tourist Signing Policy and Procedures

- Derbyshire County Council Speed Management Protocol
- Derbyshire County Council Highway Network Management Plan
- Relevant sections of Design Manual for Roads and Bridges
- The Highways (Road Humps) Regulations 1999
- Road Traffic Regulation Act 1984
- Traffic Calming Act 1992
- Relevant Traffic Advisory Leaflets
- Derbyshire Highways Inspection Manual

These documents are held on relevant websites, DNet and EDRM systems. Links are provided above.

This document is a live document that will be reviewed biannually or whenever a significant change is required to any of the processes or procedures documented within it.

5. LEVELS OF SERVICE AND CRITICAL ASSET IDENTIFICATION

The Highways Infrastructure Asset Management Policy, Strategy and Plan have developed and documented the overarching Levels of Service derived from the authority's statutory duties, the national and regional guidance, stakeholder views, the management and mitigation of risk both to the service user and the authority and the volume and type of traffic using the network.

The Levels of Service that define the Council's approach to the management of the highway assets have been defined against the Network Hierarchy and the Resilient Network. These can be accessed here. There are two levels of service in regards to safety on the network due to budgetary constraints. Levels of Service will be reviewed and amended regularly to take into account the budgetary position. The critical assets are defined as those on the resilient network. The table overleaf shows how the Levels of Service relate to the different network hierarchy levels.

DEVELOPMENT AREA 1: Calculating Levels of Service Following Asset Capture

Levels of Service percentage of services will be completed once full asset capture process is finished.

Table 2: Street Furniture (Traffic and Safety) Specific Levels of Service

	Street Furniture on Resilient Network and Critical Assets (x% of total assets See Development Area 1)	**Network Hierarchies 1 to 7 inclusive (x% of total assets See Development Area 1)**
	Level of Service 1	**Level of Service 2**
	Safety + Serviceability + Sustainability + Customer Service	**Provision of safety related issues and Customer Service only**
Objective	Comply with statutory obligations and to provide Network Safety and customer service RN to be prioritised to ensure availability and minimise costs where budgets allow	Comply with statutory obligations and to provide Network Safety and customer service
Standard	Comply with Code of Practice and apply asset management techniques to optimise whole life costs.	Comply with Code of Practice and apply asset management techniques to optimise whole life costs.
Impact/ Risks/ What it means	Safety inspections and identified safety defects prioritised according to risk based approach. **Vehicle Restraint Systems** – conduct asset and condition survey, identify prioritised programme of preventative maintenance based on the risk identification process. **Anti-skid Surfacing/Traffic Calming** – update asset inventory and identify prioritised programme of preventative maintenance based on a risk based approach. **Traffic Signs** – annual reflectivity survey, with safety critical signs prioritised, reactive maintenance only and asset reviewed as part of improvements/safety inspections. **Bollards/Pedestrian Barrier and all other street furniture** – reactive maintenance only and asset reviewed as part of improvements/safety inspections.	Predominantly reactive maintenance Minimal intervention to prevent asset deterioration Safety inspections and identified safety defects prioritised according to risk based approach Likely increase in non-safety defects with potential for increase in third party insurance claims

6. IDENTIFICATION OF NEW ASSETS – DATA CAPTURE

The following table highlights the ongoing process with regard to identifying new assets:

Table 3: Processes to Identify New Assets

Asset Type	Resilient Network & Critical Assets Level of Service 1	Level of Service 2
Vehicle Restraint System	See Development Areas 2,3 ,5, 6 and 7	See Development Areas 4, 5, 6 and 7 .
High Friction Surfacing		
Pedestrian Guardrail		
Vertical Traffic Calming Measures		
Horizontal Traffic Calming Measures (to be retained by Highway Maintenance and included in HIAMP for Highways)		
Bus Shelters		
Non-illuminated Safety Critical Traffic Signs*		
Non-illuminated Non-Safety Critical Signs and Bollards		

* These have been identified through a risk based process determined through their importance and location on the network.

All data is to be recorded and stored in accordance with the Data Management Strategy.

DEVELOPMENT AREA 2: Identification of Safety Critical Traffic Signs

Calculating the existing risk assessment of signs need further resource. This will be added to Appendix B.

7. INVENTORY UPDATE AND ASSET CAPTURE

DEVELOPMENT AREA 3: Update Inventory on Resilient Network

a) Complete driven asset capture survey of resilient network by end of March 2020 (Highway Strategy). The process is in Appendix C.
b) Establish attributes to be captured both initially and at assessment stage and produce asset inventory capture guidance by end of March 2020 shown in Appendix C. This will be done by the asset owners for traffic signs, pedestrian guardrail, marker posts and non-illuminated bollards; high friction surfacing and traffic calming, bus shelters, vehicle restraint system, with input from existing attributes.
c) First priority to capture vehicle restraint systems, high friction surfacing, speed limit signs and HGV restriction signs by end of March 2020 (Highway Strategy)
d) Remainder of assets on resilient network to be captured, with safety specific assets first. It is unknown how long this element of the work will take to complete.

DEVELOPMENT AREA 4: Update Inventory on Level of Service 2

a) Complete driven asset capture survey of non-resilient network by end of March 2020 (Highway Strategy) The process is in Appendix C.
b) First priority to capture vehicle restraint vehicle restraint systems, high friction surfacing, bus shelters, speed limit signs and HGV restriction signs by end of March 2020 (Highway Strategy).
c) Remainder of assets on non-resilient network to be captured, with safety specific assets first. It is unknown how long this element of the work will take to complete.

8. AS-BUILTS PROCESS AND DATA CAPTURE

Development Control Process

Where new assets are provided through the development control/planning process, the as-builts are to be provided by the developer and sent to each asset owner, who is responsible for entering them onto the Single Asset Management System as detailed in the Quality Management System. If the number of assets is small in number then this task is to be completed by the asset owner, however if the number of assets to be added is likely to be significant then this data capture process will be completed by the Highway Strategy team using the driven asset capture survey. See Appendix C for the detailed process. It is the asset owner's decision as to which process is to be adopted, if it is the latter process, then development control will include this item in the brief for the developer to contribute to the cost.

DEVELOPMENT AREA 5: Development Control Process

The Development Control process needs to ensure that developer schemes (S278 and S38) should produce an as built drawing which is checked by the Clerk of Works in construction and then sent to the asset owner for them to input. This task will be carried out by 1 person to complete all assets at the same time which is funded by developer control budget. Discussion with Development Control needs to occur to establish if fees need to be increased to cover this additional cost and to ensure the as built output meets the requirements of CONFIRM.

Internal Capital Schemes

Where new assets are provided by the internal design and construction services, the design brief is to include the production of an as-built/photograph of each new asset to the asset owner as detailed in the Quality Management System. If the number of new assets is small in number then the necessary update to the asset management system is to be completed by the asset owner, however if the number of new assets to be added to the database is likely to be significant then this data capture process will be completed by the Highway Strategy team using the driven asset capture survey. See Appendix C for the detailed process. It is the asset owner's decision as to which process is to be adopted. However, if it is to be the latter process, then a percentage of the overall scheme cost is to be allocated to the capital scheme to complete this task.

DEVELOPMENT AREA 6: Update Inventory – Internal Capital Schemes

This process needs developing and implementing.

Internal Revenue Schemes

Where ad-hoc new assets are provided by the asset owners' design team and internal construction services, it is the responsibility of the construction service team or the design team to provide the asset owner with an as built drawing and photo of the completed work so that the asset owner can update the asset database accordingly.

DEVELOPMENT AREA 7: Update Inventory – Internal Revenue Schemes

This process needs developing and implementing.

9. INSPECTIONS AND SURVEYS

Inspections provide the data required to support good asset management practice. The Well-managed Highway Infrastructure states in paragraphs B.5.12 and B.5.13 an inspection should be sufficient to:

- **Vehicle Restraint Systems** should be inspected and tested at intervals determined through risk assessment in respect of mounting height, protective treatment and integrity to ensure they remain fit for purpose. This should be done in line with relevant legislation.
- **Traffic signs**: are the most visible elements of the network, highly valued by users and contribute significantly to network serviceability through facilitating efficient and effective use of the network. They should be inspected at intervals determined through risk assessment according to their importance and location on the network. Traffic signs should be inspected both during daylight and at night time (RN only) to assess their retro-reflectivity. The results of this should influence the level of cleaning required. The inspection should identify signing that is inappropriate or no longer necessary and maybe a distraction to users or detrimental to the streetscene
- **Traffic calming**: should have been installed to improve network safety and their inspection arrangements should reflect this via risk assessment.

Risk assessments are to be undertaken to determine which assets will be routinely inspected for condition (all assets are inspected routinely for safety). The risk assessments will be provided in Appendix D once Development Area 8 is completed, and the table below summarises which street furniture assets are inspected for condition:

Table 4: Asset Inspections

Assets inspected routinely for condition	Assets not inspected routinely for condition
Vehicle Restraint Systems	Pedestrian Guardrail
Traffic Signs – night time only on the RN	Traffic Calming – adhoc only
High Friction Surfacing	Bollards

All inspections must be carried out in a safe manner so as not to endanger staff or the public. All operations should have a current risk assessment and all documents are available on either Dnet or in EDRM as appropriate. All data is to be recorded and stored in accordance with the Data Management Strategy.

DEVELOPMENT AREA 8: Condition Risk Assessments

Condition risk assessments need to be written and communicated to relevant staff members. These will be added to Appendix D.

Routine Surveillance

This is undertaken via highway infrastructure asset safety inspections which are undertaken by Highway Inspectors and are designed to identify, assess, record and prioritise the repair of identified safety defects which may present an immediate danger or significant inconvenience to users of the highway. The information detailing the processes involved in completing safety inspections and the risk based approach to safety defect assessment and repair are detailed in the Highway Infrastructure Asset Safety Inspections Manual.

Initial Asset Identification Inspection – Data Capture

At the point where a new street furniture asset has been provided it is the responsibility of the following to inspect the asset to ensure that it meets the design criteria:

- Externally provided schemes – the construction clerk of works
- Internally provided capital schemes – the designer, however the asset owner is to inspect all safety critical assets
- Internally provided revenue schemes – construction services technician.

Where the inspection is conducted on site the procedure in Appendix C is to be followed. Where the inspection is conducted by the driven video capture system the procedures in Appendix C to be followed.

DEVELOPMENT AREA 9: Inspection Interval

High friction surfacing is to be put into a programme for a condition inspection dependent on its location within the network hierarchy, this is discussed further along with the interval for re-inspection in the HIAM Part 2 for Highways.

Vehicle restraint systems are risk assessed, against their location and put into a priority programme for a condition inspection, the re-inspection interval is determined through the manufacturer's guidance.

Enquiry/Adhoc Inspection

As a result of a highway safety inspection or due to a customer enquiry, an adhoc inspection may be undertaken of any street furniture type. The asset information for any safety street furniture asset is provided to the traffic and safety team for assessment to establish if the asset is still required, and if it requires replacement/repair.

The following document should be followed and can be found in Appendix C:

- DCC Street Furniture Management & Maintenance Document "Procedures for dealing with calls reporting street furniture problems"

Condition Inspection

As part of either the asset inventory capture survey or the routine condition inspection, a condition of the asset is determined and the condition rated as either, good, fair or poor. The criteria for these are as follows: (the level of detail will change depending on what the asset inventory capture survey guidance stipulates it will record).

Table 5: Condition Criteria

Asset Type	Condition Inspection Method	Condition	
		Adequate	Inadequate
Non-Illuminated Traffic Sign	Asset Inventory Capture Survey	**Legible/visible message to relevant road users** **Damage**: that does not affect its structural integrity or is not a danger to road users **Meets current regulations/routing requirements**	**Obscured message**: sign is dirty, obscured by trees/other objects, turned to angle where it cannot be read, vandalised, non-reflective **Damage**: bent/leaning/corroded/ missing **Obsolete/Superseded**: no longer to current regulations/required
Non-Illuminated Bollard	Asset Inventory Capture Survey	**Damage**: superficial damage that does not affect its structural integrity/ performance or is not a danger to road users	**Damage**: bent/leaning/corroded/ missing/non-reflective
Vehicle Restraint System	Asset Inventory Capture Survey and Individual Condition Inspection	**Damage**: superficial damage that does not affect its structural integrity/ performance or is not a danger to road users	**Damage**: particularly to the rear of the fence/mounting, loss of tension **Corrosion**: including fence and bolts **Post deterioration**: including loosening of foundation and rotting of timber posts **Reduction in clearance**: in front/behind safety fence including obstructions **Missing posts and bolts** **Obsolete/Superseded**: no longer required
Pedestrian Restraint System	Asset Inventory Capture System	**Damage**: superficial damage that does not affect its structural integrity/ performance or is not a danger to road users.	**Damage**: particularly to the rear of the fence/mounting, loss of tension **Corrosion**: including fence and bolts **Post deterioration**: including loosening of foundation and rotting of timber posts **Reduction in clearance**: in front/behind safety fence including obstructions **Missing posts and bolts** **Obsolete/Superseded**: no longer required
Traffic Calming	Initial Engineer Visual Inspection	Initial engineer visual inspection and where parameters are met escalation to the lab for further testing.	In excess of specified height/ramp requirements?
High Friction Surfacing	Initial Engineer Visual Inspection	Initial engineer visual inspection and add to SCRIM programme if within relevant parameters.	**Skid resistance**: does not meet the required skid resistance criteria **Obsolete/Superseded**: no longer required

DEVELOPMENT AREA 10: Vehicle Restraint System Condition Inspection

Derbyshire Traffic and Safety team are all trained in Vehicle Restraint Systems and are now an intelligent client. A budget is to be allocated to procure an external company to start inspecting this asset.

All condition data from any inspection should be recorded and stored within the SAMS computer program. Data is controlled in accordance with the Data Management Strategy.

DEVELOPMENT AREA 11: Night-time Safety Inspection

Derbyshire do not currently carry out night-time inspections to assess the reflectivity condition of both non illuminated road signs and non-illuminated bollards due to financial constraints. Consideration may be given to carrying out these inspections if the financial situation improves in the future.

10. ASSET CONDITION AND ASSESSMENT

The table below details the asset assessment and possible outcomes for each asset type:

Table 6: Assessment Criteria

Asset Type	Assessment Criteria	Possible Outcomes
Non-Illuminated Traffic Sign	• Desktop exercise to establish if it is still required in current context of: sign type, routing requirements, regulations, location and network hierarchy • Signs to be tagged for removal with an expiry date (slippery road signs/new road layout/new speed limit etc) Program to be run annually to provide works programme • Condition assessment against criteria outlined in Table 5	Replacement/ Removal/ Cleaning
Non-Illuminated Bollard	• Condition assessment against criteria outlined in Table 5	Replacement/ Removal/ Cleaning
Vehicle Restraint System	• Desktop exercise to establish if still required following guidance in "Provision of Road Restraint Systems on Local Authority Roads" • Condition assessment in accordance with manufacturer's guidelines	Replacement/ Removal/ Repair
Pedestrian Restraint System	• Desktop exercise to establish if still required in current context of: routing requirements, regulations, location and network hierarchy • Condition assessment against criteria outlined in Table 5	Replacement/ Removal/ Repair
Traffic Calming	• Desktop exercise to establish if still required. See Development Area 12. • Analysis of recent road traffic collision data in conjunction with pre and post traffic speed data where available • Condition assessment against what guidelines • Crude assessment to see if t/c feature is in excess of 90m, if so refer for further testing to lab. Criteria if feature exceeds 100mm then rectify (Development area: of approximate cost per year to do a couple of these)	Removal/Repair
High Friction Surfacing	• Desktop exercise to establish if: o extents can be reduced in accordance with new Derbyshire departure from standard (for those locations on approaches to a pedestrian crossing within a 30mph speed limit, a reduction of the length from 50metres to the end of the zigzags – need study from Road Safety for those locations where this has been undertaken to see if it has affected safety o if it is still required in current context of: routing requirements, regulations, location and network hierarchy • Assessment of the SCRIM score against the intervention criteria outlined in Table 5	Allow to return to acceptable friction levels for normal surfacing Add to programme of resurfacing works

DEVELOPMENT AREA 12: Development of Desktop Exercises to Enable Assessment of Assets

Desktop exercises to be created to support assessment of our assets.

11. LIFECYCLE PLANNING

No lifecycle planning is completed for non-illuminated signs, non-illuminated bollards, pedestrian restraint systems and traffic calming assets for a number of reasons, these include:

- the asset information held for street furniture does not include a construction date
- the asset lifecycles can vary considerably in length due to an assets use and its location

However, lifecycle planning is completed for high friction surfacing and this is included in the Highways Part 2 document.

Once Development Areas 3 and 4 are completed it will be possible to calculate Gross Replacement Costs and Depreciated Replacement Costs.

DEVELOPMENT AREA 13: Vehicle Restraint System Lifecycle Planning

This is to be introduced once the initial condition inspection has been undertaken. It will be bespoke to each location and dependent on the manufacturer's guidance.

12. MAINTENANCE PROCESSES

There are three types of maintenance works undertaken:

(a) **Reactive maintenance**, covers the identification and repair requirements of safety defects generally resulting from either highway infrastructure asset safety inspections or reports received from third party sources such as police, members of the public, other council departments and the call centre. Repairs are actioned on a priority basis dependant on the severity of the damage and location on the network. Before any works are commissioned the Traffic and Safety team assess the need for the asset to remain. Reactive Maintenance Process Maps can be found in the Reactive Maintenance Teams Operational Manual.

(b) **Routine or cyclic maintenance** is a do-minimum response to keep the asset in a steady state. Typical minor works include:

- Cleaning of sign faces on the resilient network initially
- Vegetation removal
- Graffiti removal
- Painting of supports and frames when required to prolong the life of the asset
- Retightening of bands, brackets, bolts and fittings

However, currently there are no cyclic maintenance activities undertaken on these assets

(c) **Planned or programmed works**, this follows the condition assessment or is completed during an improvement scheme in which the existing assets are assessed to establish if they are still required.

DEVELOPMENT AREA 14: Development of Planned Works Process Maps

Planned works process maps are currently under review and need to be developed in the future.

13. BACKLOG

As we do not do lifecycle planning on these assets, it is not possible to estimate the amount of backlog work that could exist on it.

Derbyshire should be able to estimate the backlog to provide the development areas identified which could be split into short-term (1 to 2 years), medium-term (3 to 10 years) and longer-term (11 to 20 years) investments after Development Areas 3 and 4 are completed.

Additionally it is assumed that annually the following requires funding:

- Replacement of some asset stock of non-illuminated signs, non-illuminated bollards, pedestrian restraint systems. This will be paid for mainly through revenue funding.
- Annual cleaning costs.
- Vegetation removal and other defects rectified through the safety inspection manual process.
- Sign removal programme (slippery road signs etc).

Unlike other assets we do not carry out cross asset assessment on street furniture assets other than considering decluttering when signs are damaged and considered for replacement.

14. VALUE MANAGEMENT/ENGINEERING APPROACH

DEVELOPMENT AREA 15: Adopting a Value Management/engineering Approach

Derbyshire would like to adopt a value management approach where by we take into account the benefits of undertaking maintenance and the risks of not undertaking maintenance which then provides a prioritised list for Value Engineering to ensure we choose the optimal solution to ensure maintenance need is met while reducing waste and inefficiencies.

15. CROSS ASSET CONSIDERATION

When considering financial requirements Derbyshire will consider allocating budget to those assets that require more financial input regardless of where the money was originally allocated.

16. FORWARD PROGRAMME

DEVELOPMENT AREA 16: Prioritised Maintenance Programme

A prioritised programme of maintenance will be identified for vehicle restraint systems, traffic calming and high friction surfacing based on its existing condition and an assessment as to whether it is still required. For all remaining street furniture assets, maintenance is completed on a purely reactive basis.

The prioritisation of the schemes identified within the forward programme will be determined annually by available budget, condition and risk.

17. ANNUAL PROGRAMME

The annual programme will generally be the first year of the forward programme in regard to vehicle restraint systems, traffic calming and high friction surfacing. All other assets are reactive maintenance.

18. RISK REGISTER

A risk can be defined as an uncertain event which influences the desired performance of an asset. A risk factor is the produce of the severity of an event and the likelihood of its occurrence. Derbyshire County Council has a well-established risk management process that overarches all service areas.

The risk management process concentrates on four main issues, by applying these risk management principles, the council will be able to more appropriately target resources and to deliver services and projects in a way that ensures the council's overall exposure to risk is minimised.

The following risk register identifies risks and appropriate mitigation measures.

TABLE 7: RISK IDENTIFICATION

Risk Level	Identify Risks	Evaluate Risk	Manage Risk
Strategic	Understanding the Asset	The absence of asset information compromises the ability to provide lifecycle planning and consider budgetary allocations	Identify the location of street furniture to enable lifecycle planning and budgetary allocation.
	Budget Concerns	The absence of relevant finances will mean signing will go missing or deteriorate compromising the road safety of road users and damage the infrastructure surrounding the highway	Budget management and apply for additional funding where feasible Lifecycle planning Budget Management
	Changes to Traffic	Changes to traffic patterns and the usage of road may alter network prioritisation of asset stock	Pre-empt network changes or travel patterns at the design and planning stages
	Climate Change	Increase in the rate of replacement of existing assets	Analysis of existing asset stock to establish the need for the asset Rationalisation exercise of assets to consider future asset reduction
Operational	Increase to asset stock due to future road safety improvements or due to adoption of additional highway infrastructure through	Increase in asset stock while revenue funding is decreasing. This will incur net gain on maintenance	Analysis of existing asset stock to establish the need for the asset.

	development schemes.		Rationalisation exercise of assets to consider future asset reduction.
	Deterioration resulting in structural failure of the asset	Increase in the rate of replacement of existing assets	Analysis of existing asset stock to establish the need for the asset. Rationalisation exercise of assets to consider future asset reduction.
	Changes to national regulations which may lead to requirements for additional asset stock	Increase in the rate of replacement of existing assets	Analysis of existing asset stock to establish the need for the asset. Rationalisation exercise of assets to consider future asset reduction. Consider adopting local criteria to deviate away from agreed national standards.
	Changes to national specifications or standards or departing from European standards (e.g. Brexit)	Increase in the rate of replacement of existing assets. Use of inferior materials which don't perform.	Analysis of existing asset stock to establish the need for the asset. Rationalisation exercise of assets to consider future asset reduction. Consider adopting local criteria to deviate away from agreed national standards. Adopt local criteria for the specification of materials

19. COMPETENCY AND TRAINING

Derbyshire County Council has an internal competency specification for all highway inspectors and this is outlined in the Highways Infrastructure Asset Safety Inspection Manual.

All inspection procedures, toolbox talks and risk assessments are reviewed, updated and then trained on an annual basis. The departmental code of practice is reviewed on a five yearly basis.

All external contractors have a minimum specification for competency when undertaking condition inspections. These can vary according to the type of work to be carried out.

All competency and training requirements are summarised within the skills matrix in Appendix E (See Development Area 18) and managed through the Derbyshire County Council MyPlan system.

DEVELOPMENT AREA 17: Enumerator Training

Training will be developed and delivered for key staff to be able to undertake the driven asset capture survey and data capture process.

DEVELOPMENT AREA 18: Skills Matrix

A skills matrix across the Highways department is required. See Appendix E.

20. PERFORMANCE MANAGEMENT FRAMEWORK

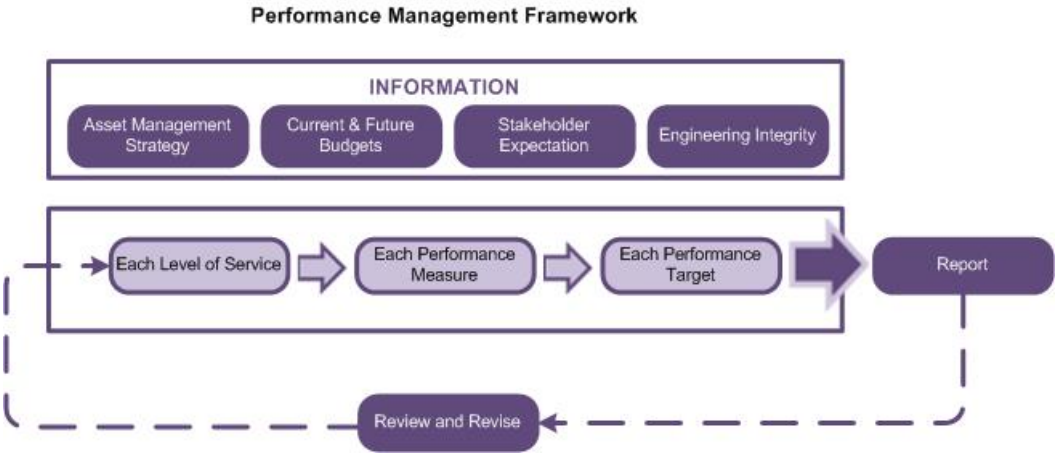
The Performance Framework is used as a tool to inform, measure, review and derive the management and decision-making processes associated with implementing corporate changes and day-to-day decisions relating to the delivery of services, linked to the network hierarchy. The figure below shows the performance management framework.

It is not intended that the Council creates a host of measurements that serve little purpose other than to demonstrate the presence of a framework. At any level, external-facing performance measures should show how well services are being delivered and whether objectives are being achieved.

Internally, a range of input and output measures may be used for monitoring purposes but the key indicators should reflect performance in key service areas to inform senior managers as well as corporate and stakeholders of the service as a whole.

The Performance Management Framework diagram is shown overleaf:

Diagram 2: Performance Management Framework



The table overleaf shows the performance measures and targets for carriageway.

Table 8: Performance Measures

Level of Service	Performance Measure	Level of Service 1 Resilient Network	Level of Service 2 Network Hierarchies 1 - 7
		Target	Target
Safety	% of 32 hour defects repaired in target time	90%	
	% of 9 day defects repaired within target time	90%	
	% of 28 day defects repaired within target time	80%	
	Average traffic and safety assessment time for all safety street furniture with the exception of high friction surfacing and vehicle restraint systems	20 working days	30 working days
	Average assessment and repair time for vehicle restraint systems (Martins)	6 months	
	Average construction repair time for all other non-safety critical signs/ bollards	3 months	
Serviceability	Cleaning targets	3 months	
Sustainability	% as-builts provided	100%	
	% asset inventory updated	100%	
	Backlog	See section 13: Backlog	
Customer Service	NHT % of residents satisfied with the condition of road markings HMBI 03	59%	
	NHT % of residents satisfied with the condition and cleanliness of road signs HMBI 04	58%	

21. COMMUNICATIONS

This is covered within the separate Highways Communications Plan.

22. CLIMATE CHANGE ADAPTION AND CIVIL EMERGENCIES AND SEVERE WEATHER EMERGENCIES PLANS

All plans relating to this area of work are included on the Derbyshire Prepared website and Derbyshire have taken or are taking action against all of the recommendations raised in the 2009 3 Counties Alliance Partnership The Effects of Climate Change on 3CAP's Highway Network Polices and Standards.

The corporate climate change manifesto can be found here.

23. HERITAGE AND CONSISTENCY WITH CHARACTER

Generic information that will relate to all assets and crosses all HIAM Part 2 documents and therefore included in the Highway Network Management Plan.

24. CARBON REDUCTION

Generic information that will relate to all assets and crosses all HIAM Part 2 documents and therefore are included in the corporate Carbon Reduction Policy.

25. ENVIRONMENTAL IMPACT, NATURE CONSERVATION AND BIODIVERSITY

Generic information that will relate to all assets and crosses all HIAM Part 2 documents and therefore are included in the Highway Network Management Plan.

26. SUPPLY CHAIN COLLABORATION AND COLLABORATION IN SERVICE DELIVERY

Framework agreements are in place for the procurement of traffic sign posts and traffic signs.

DEVELOPMENT AREA 19: Additional Contractor Frameworks

Consideration needs to be given to creating frameworks for vehicle restraint systems, anti-skid surfacing and traffic calming.

27. DELIVERY

Delivery is primarily completed through the Derbyshire County Council Construction Services. The construction process is currently under review.

28. PROCUREMENT

Delivery of all works pertaining to non-illuminated signs, non-illuminated bollards, pedestrian restraint systems, high friction surfacing and traffic calming will be delivered by Derbyshire County Council contracting services.

All construction works pertaining to vehicle restraint systems will be delivered by a framework contract.

29. OPERATIONAL POLICIES

Operational Policies are covered in the Highway Network Management Plan.

30. APPENDICES

APPENDIX A: DEVELOPMENT AREA SUMMARY

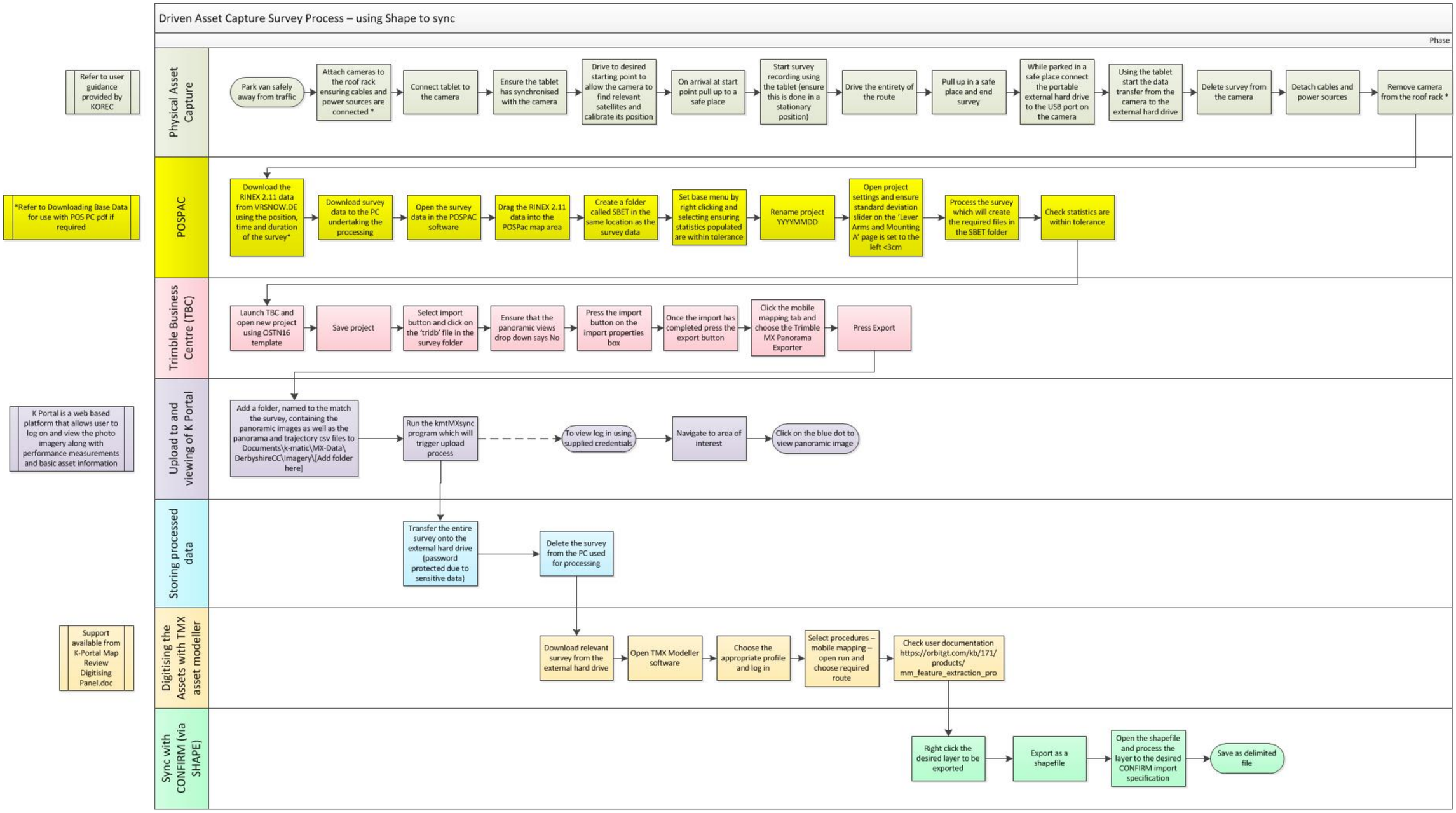
Table 9: Development Area Summary

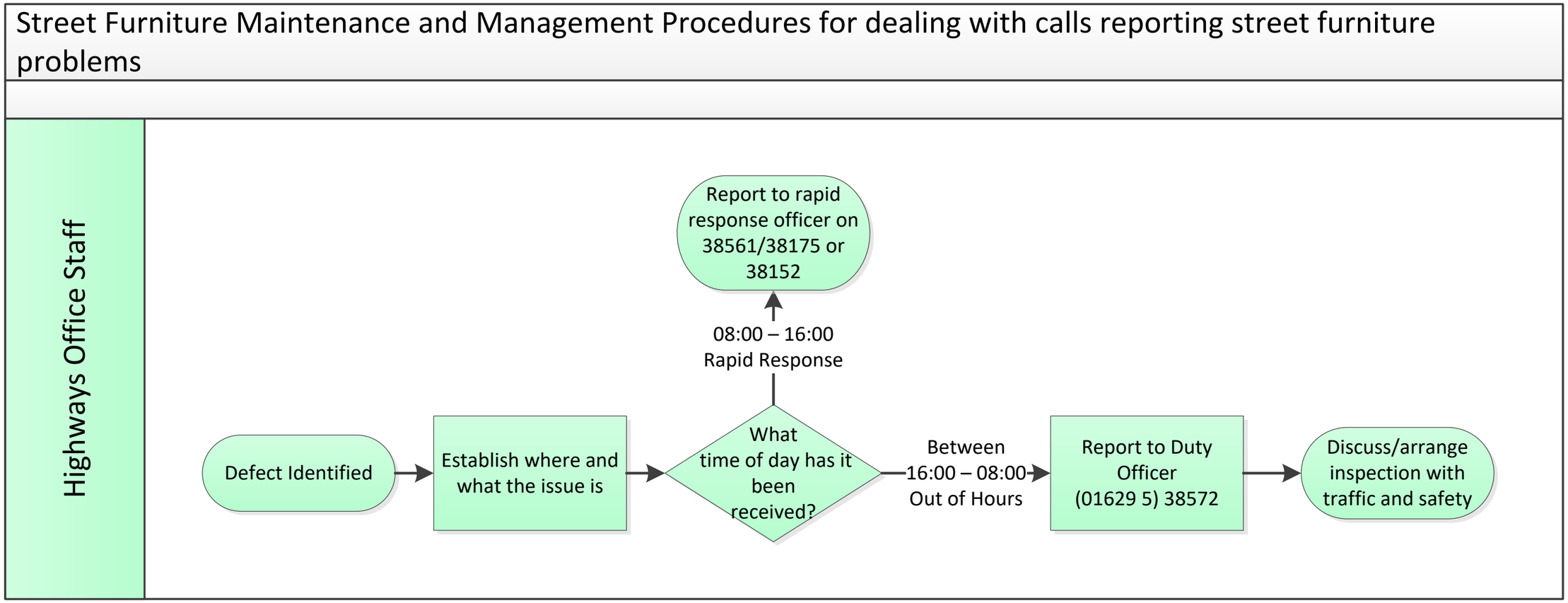
Development Area Number	Development Area Title	Action Taken
1	Calculating levels of service following asset capture	
2	Identification of safety critical traffic signs	
3	Update inventory on resilient network	
4	Update inventory on level of service 2	
5	Development control processes	
6	Update inventory – internal capital schemes	
7	Update inventory – internal revenue schemes	
8	Condition risk assessments	
9	High Friction Surfacing inspections	
10	Vehicle restraint system condition inspections	
11	Night-time safety inspections	
12	Development of desktop exercises to enable assessment of assets	
13	Vehicle Restraint System Lifecycle Planning	
14	Developing Planned Works Process Maps	
15	Adopting a value management/engineering approach	
16	Prioritised Maintenance Programme	
17	Enumerator Training	
18	Creation of a skills matrix	
19	Additional Contractor Frameworks	

APPENDIX B: IDENTIFICATION OF SAFETY CRITICAL TRAFFIC SIGNS

This will be written as part of Development Area 2.

APPENDIX C: PROCESS MAPS





APPENDIX D: RISK ASSESSMENT TO DETERMINE CONDITION INSPECTIONS

These will be written as part of Development Area 8.

APPENDIX E: SKILLS MATRIX

This will be written as part of Development Area 18.

HIGHWAY INFRASTRUCTURE ASSET MANAGEMENT PLAN FOR STREET LIGHTING

JANUARY 2020

AN ELEMENT OF THE HIGHWAY INFRASTRUCTURE ASSET MANAGEMENT SYSTEM

Document Information

Title	Highway Infrastructure Asset Management Plan for Street Lighting
Author:	Teri Ford/Bronwen Terry
Reviewed:	Simon Tranter

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TABLE OF AMENDMENTS					
NO	**APPROVAL DATE**	**SECTION**	**PARAGRAPH**	**DETAILS**	**AUTHOR**
1	xx/xx/20xx	All	All	First Issue	

Contents

1. INTRODUCTION

The Well Managed Highway Infrastructure Code of Practice sets out the approach to the maintenance of street lighting assets and states:

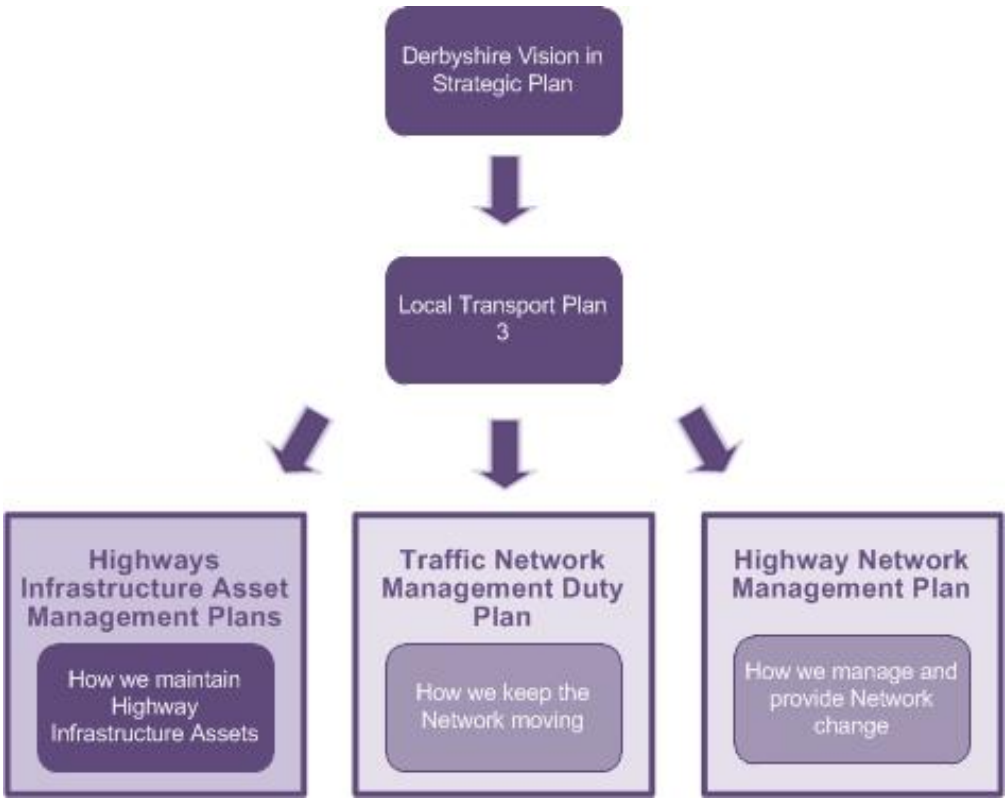
"A lighting system requires inspection and maintenance to ensure that it is safe, operates correctly, continues to provide the designed performance and in order to maximise its useful life."

This document provides the technical details that supports the Highways Infrastructure Asset Management Strategy and Plan and forms part of the Highways Infrastructure Asset Management suite of documents. It is a working document that provides the processes and information used internally by staff undertaking roles in delivery of service.

This document will recognise a number of Development Areas where Derbyshire has recognised potential improvements to the service they deliver. These development areas are aspirations only and will be reviewed on an annual basis to assess whether they are deliverable from a financial and resource perspective. A breakdown of these Development Areas can be found in Appendix A.

The following figure shows this document in context with other key documents in how the network is managed, maintained and changed:

Diagram 1: Plans and Policy Framework



2. SCOPE

This document covers the street lighting assets on the Derbyshire highway network that Derbyshire have a responsibility to maintain. Street lighting assets include street lighting columns, which can be constructed of either aluminium, steel or concrete, lighting units (including those mounted onto telegraph poles), associated cables/ducting, subway lighting units, parking meters, illuminated signs, bollards and beacons. All assets have unique asset ID which is applied by adhesive label or spray painted on. This is how Derbyshire fundamentally identify one asset from another. Guidance on attachments to street lighting columns is included in the Network Management Duty Plan and further information can be found on the Derbyshire website.

Lighting Columns on Non-DCC Highway Network

This document does not cover those street lighting elements maintained by third parties such as District/Parish/Town councils, local land owners and businesses.

DEVELOPMENT AREA 1: Identifying Street Lighting Assets Located on Non – DCC Highway Network

There are a number of lighting columns that are currently maintained by Derbyshire County Council that are not located on the Derbyshire County Council highway network which is maintainable at public expense. The following needs to take place:

1) Those street lighting columns located on non-DCC highway network are to be identified by a desktop exercise.
2) Continuing liaison with district and borough councils regarding ownership of street lighting assets
3) For those assets identified as located on non-DCC highway network, the number, location and current energy cost liability are to be documented for each location.
4) Where there is a possibility of transferring to another more relevant owner for maintenance (such as another authority) this is to be investigated and potential cost savings identified. The risks issues of implementation are also to be outlined.

DEVELOPMENT AREA 2: Boundary Agreements

There are currently no boundary agreements in place with neighbouring authorities. Derbyshire would like to instigate boundary agreements for street lighting assets.

3. ASSET CAUSES OF DETERIORATION

The main causes of street lighting deterioration are itemised overleaf:

Table 1: Asset Causes of Deterioration

Asset Type	Cause of Deterioration	Description	Typical Defects
Lighting Columns	Accident	Vehicle Impact	Deformation or destruction of lighting columns
	Loading	Wind loading or attachments such as planters, cameras etc	Leaning columns or loose in the ground
	Winter de-icing salts, water ingress, weathering, dog fouling	Corrosion	Corrosion of steel lighting columns generally at joins, welds and bases
	The internal mortar bungs in type 1805 concrete lighting columns become loose and fall out allowing corrosion to take place	Corrosion of reinforcing bars occurs which creates a stress area then cracking internally occurs migrating through and outward in the structure	Catastrophic failure
	Vandalism	Third party damage to columns and lanterns	Removal of access panel, graffiti, breaking of lanterns
Illuminated Signs	Trees	Dirt and dust adhere to sign face due to leaf sap and other residues	Illegible, loss of reflectivity
	Lack of cleaning	General dirt and dust accumulation from vehicular traffic	Illegible, loss of reflectivity
	Impact usually vehicle damage	Bending of sign face, disconnection from posts	Destruction or severe impairment of the sign
	Loading	Poor design of posts/wind loading	Leaning of sign and posts/sudden structural failure
	Ageing	Assets approaching end of design life, affected by sunlight	Fading/sign illegible
	Vandalism/graffiti	Spray painted words, bending of sign face, damage to brackets	Sign illegible
	Winter de-icing salts, water ingress, weathering, dog-fouling	Corrosion	Corrosion of steel lighting columns generally at joins, welds and bases

4. NATIONAL/LOCAL GUIDANCE AND RELATED DOCUMENTS

The maintenance of street lighting is governed by a series of national/local documents and guidance including:

- Well-managed Highway Infrastructure: A Code of Practice (October 2016)
- GN22/19 Asset-Management Toolkit: Minor Structures
- BS 7671:2018 IET Wiring Regulations (valid from 1 January 2019)
- The Electricity at Work Regulations 1989
- The Work at Height Regulations 2005 SI 2005/735
- CEN 13201 Road Lighting. Selection of lighting classes
- BS 5489 Code of practice for design of road lighting
- BS EN 12767:2007 Passive safety of support structures for road equipment
- NHSS 8 installation & Maintenance – Highway Electrical Works
- Construction (Design and Maintenance) Regulations 2015

- Traffic Management Act 2004

These documents are either available online (and links provided from this document) or held within the Street Lighting Technical Library.

This document is a live document that will be reviewed biannually or whenever a significant change is required to any of the processes or procedures documented within it.

Internally a number of quality management processes have been created to control the work in the following areas and where applicable these are discussed at appropriate points and referenced. A number of industry guidance documents that are held internally online here. There are highway electrical standard drawings, a street lighting specification and a lighting policy based on the road hierarchy also used and these will be stored on EDRM.

5. LEVELS OF SERVICE AND CRITICAL ASSET IDENTIFICATION

The Highways Infrastructure Asset Management Policy, Strategy and Plan have developed and documented the overarching Levels of Service derived from the authority's statutory duties, the national and regional guidance, stakeholder views, the management and mitigation of risk both to the service user and the authority and the volume and type of traffic using the network.

The Levels of Service that define the Council's approach to the management of the highway assets have been defined against the Network Hierarchy and the Resilient Network (RN). These can be found online here. There are two levels of service in regards to safety on the network due to budgetary constraints. Levels of Service will be reviewed and amended regularly to take into account the budgetary position. The policy for determining light levels based on the Road Hierarchy can be found in Appendix B.

Critical Assets

Critical highway infrastructure is considered to be those assets where failure would result in significant impact to the local, and potentially the national economy. They have a high consequence of failure, but not necessarily a high likelihood of failure.

The highway critical street lighting assets were previously defined as those that over 8 metres in height. This definition has been amended to include those assets that are over 8 metres tall and that are located on the resilient network, those assets that are located at safety critical locations such as on bridge decks, near level crossings or near zebra/pedestrian crossings and in town centres. A list showing the street lighting critical assets on the RN is provided in Appendix C.

> **DEVELOPMENT AREA 3: Other Safety Critical Lighting Column Assets**
>
> A definition of the criteria is required to identify which lighting columns on the approach to a zebra/ pedestrian crossing are considered safety critical. A desktop study is required to identify these assets and those located on bridge decks and near level crossings by cross referencing with information held on structures including non-Derbyshire structures.

The table overleaf shows how the Levels of Service relate to the different network hierarchy levels.

Table 2: Street Lighting Levels of Service

	Street Lighting on Resilient Network and Safety Critical Assets (13% of total assets)	Street Lighting on Network Hierarchies 1 to 7 inclusive (87% of total network)
	Level of Service 1	**Levels of Service 2**
	Safety + Serviceability + Sustainability + Customer Service	**Provision of safety related issues and Customer Service only**
Objective	Comply with statutory obligations and to provide Network Safety and customer service RN to be prioritised to ensure availability and minimise costs where budgets allow	Comply with Code of Practice and apply asset management techniques to optimise whole life costs.
Standard	Comply with Code of Practice and apply asset management techniques to optimise whole life costs.	Provision of reactive based approach to maintenance only.
Impact/ Risks/ What it means	Lifecycle planning and programme to tackle backlog of improvements. To convert assets to LED technology and replace assets where deterioration is present. Safety inspections and identified safety defects prioritised according to risk based approach. Customer reported failures completed within target period both under the control of Local Authority and under the control of the DNO. Faults on Street Lighting at zebra crossings to be rectified within 24 hours.	Predominantly reactive maintenance with only safety issues addressed. Lifecycle planning, however due to funding an annual programme of works will not be prioritised. Little or no repairs for non-safety defects outside of the programme to convert assets to LED technology and replace columns where deterioration present. Safety inspections and identified safety defects prioritised according to risk based approach. No cyclic maintenance. Lamps allowed to burn to extinction resulting in high number of faults. Growing backlog of obsolete columns. Replacements restricted to potential hazards. Customer reported failures completed in average of 28 days.

6. IDENTIFICATION OF NEW ASSETS/IMPROVEMENT OF ASSET DATA – DATA CAPTURE

The following table highlights the ongoing process with regard to identifying new assets and improving the data we have on existing assets:

Table 3: Identification of New Street Lighting Assets

Structure Type	Resilient Network and Critical Assets Level of Service 1	Network Hierarchy 1 – 7 inclusive Level of Service 2
Street Lighting Column – steel	On a reactive basis only	
Street Lighting Column – concrete	On a reactive basis only	
Street Lighting Column – cast iron	On a reactive basis only	
Illuminated Signs	See Development Area 5	
Illuminated Bollards	See Development Area 5	
Subway Lighting Units	Improvements to data required	
Parking Meters	Identify assets and record with SAMS. Create smart parking meter asset that can be remotely monitored and managed providing data on revenue income and parking occupancy at sites across the County	
Refuge Beacons	Audit and identify those for which illumination can be removed	

All data is to be recorded and stored within the Asset Management System in accordance with the Data Management Strategy and Quality Management System.

DEVELOPMENT AREA 4: Updating the QMS Process Maps

The Quality Management System processes require an update and will be added to Appendix D.

7. INVENTORY UPDATE AND ASSET CAPTURE

DEVELOPMENT AREA 5: Illuminated Signs and Bollards

Changes in national guidance has reduced the requirement for illumination depending on the sign/bollard type and its location. A desktop audit exercise will be conducted to establish those signs/bollard which no longer requiring illumination.

Subway Lighting Units

Subways lights are identified as such within Confirm as the feature type “Subway Lighting 3m” each fitting within each subway has a unique number and asset record on Confirm. Current maintenance programme is to repair when they fail and this is likely to continue until funding can be secured to convert to LED. Failures will be repaired on the standard 28 day programme.

8. AS BUILTS AND DATA CAPTURE

Development Control processes will support the gathering of new as built information for new developments.

9. INSPECTIONS AND TESTING

Visual Inspection

All lighting columns are visually inspected each time an asset is attended for reactive maintenance. If an asset is found to be in a dangerous condition this is reported to the clerk of works for follow up action. Highway Inspectors are also carrying out brief visual inspections of lighting assets and where safety concerns arise these are added to CONFIRM and passed to asset owner for action programme. Inspections provide the data required to support good asset management practice and meet the requirements of the GN22/19.

> **DEVELOPMENT AREA 6: Inspection Interval Development**
>
> Inspection intervals will be developed on a risk based approach following initial inspections and the recommendations of GN22/19 and this will be added to Appendix E.

The following documents are to be referenced and followed when undertaking any site work:

- DCC Emergency Information Handbook (Version 2.0)
- Street Lighting Generic Risk Assessment
- COSHH
- BS7671 Requirements for electrical installations
- All relevant GCP document
- Street Lighting Operations Guidance

Indicative Testing

Loss of section monitoring or ultra-sonic testing can determine the presence of localised corrosion either above or below ground. If it is determined that there is no significant loss of section no further action may be required. However, if significant corrosion is detected, the strength of the column would need to be determined by a strength test.

Structural Condition Inspection and Testing

All 8m + lighting columns are routinely inspected as part of the structural testing contract. The structural testing contract is currently been processed via the YPO framework. Where lighting columns show signs of structural deterioration, a strength test should be carried out to determine if it has sufficient strength to withstand its design windloading. Only strength testing that guarantees that a lighting column is structurally sound and should not fail within a certified period should be undertaken.

The procedures to complete a structural condition inspection of street lighting assets by these methods and to input the resultant data are found in Appendix D.

Electrical Inspection and Testing

Electrical testing is carried out in accordance with BS7671 and guidance note 3. Derbyshire has an aspiration to increase the testing of assets on a risk based approach.

Routine Surveillance

This is undertaken via highway infrastructure asset safety inspections which are undertaken by Highway Inspectors and are designed to identify, assess, record and prioritise the repair of identified safety defects which may present an immediate danger or significant inconvenience to users of the highway. The information detailing the processes involved in completing safety inspections and the risk based approach to safety defect assessment and repair are detailed in the Highway Infrastructure Asset Safety Inspections Manual.

The repairs identified are categorised as the operational asset management and includes the day to day reactive maintenance attending repairs and emergency situations. The timescale for repair is 28 days and there is not currently a central management system for this area of work.

Fault/failed lighting is reported either through the highway asset safety inspections or via members of the public who report issues to the generic street lighting email address etc.streetlighting@derbyshire.gov.uk which is monitored by three business support officers.

Initial Asset Identification Inspection – Data Capture

At the point where a new street lighting asset has been identified through either routine inspections or through new assets being provided through capital/revenue schemes an initial inspection will be undertaken.

As part of this inspection process a risk assessment will be undertaken to establish the appropriate interval time for re-inspection.

New assets will be given a new asset record on CONFIRM and a unique asset number displayed on the asset. New assets will only be added in accordance with the Derbyshire Investment Protocol.

Enquiry/Adhoc Inspection

These inspections will occur as a result of:

- a highway safety inspection reporting dangerous condition of an asset;
- due to a customer enquiry reporting a dangerous condition of an asset;
- an adhoc inspection may be undertaken of any street lighting asset type to ascertain action to be taken.

The process for this type of inspection can be found in Appendix D.

10. ASSET CONDITION AND INSPECTION

Condition Assessment

Assessment of the lighting column condition enables any deterioration to be determined and the physical integrity of the lighting column to be managed. There currently is no previous data to base risk against. The structural testing Derbyshire are carrying out will see every ≥8m column inspected. The outcome of that inspection will become the basis for the frequency of future inspections. Once we have a programme in place, new columns will only be inspected once they are 10 years old as there is no need prior to this. This ties into the corrosion protection system for lighting columns which states no maintenance for up to 10 years, minor maintenance from 10 years and major maintenance after 20 years.

Routine Column Inspection

To be carried out on every occasion that the column is visited, but at least once every two years. The biannual inspections should be fulfilled by the highway safety inspections.

Detailed Inspection

New assets will be inspected 10 years after installation and then as required following reports from routine inspections. Assets will be inspected once every 5 years for standard installations and 3 years for flange plate mounted columns. The inspection intervals should be reduced as the asset ages and begins to show signs of corrosion or other problems.

Table 4: Street Lighting Condition Assessment

Priority	Condition Definition/Criteria	Action	Recommended Treatment
Red – High Risk	Category 5 (GN22/TR22 Category 2U)	Immediate or programmed for replacement within a safe time so as not to endanger the highway user	• Immediate replacement/action or works within a maximum of 12 weeks
Amber – Medium to High Risk	Category 4 (GN22/TR22 Category 1U)	Programmed remedial works so as not to endanger the highway user	• Immediate replacement/action or works within a maximum of 24 weeks
Yellow – Medium to Low Risk	Category 3 (GN22/TR22 Category 2G)	Monitored and re-inspected within an 18 month period or as identified by the condition assessment. Asset should be re-categorised	• Detailed inspection to evaluate/confirm assessment • Instigate a programme of specialist assessment • Check assessment against support specification and re-categorise or add to the strategic works programme
Green – acceptable condition	Category 1 and 2 (GN22/TR22 Category 3G and 5G)	No Action	• Re-test in 5 years

All data recorded at any of the above inspections is recorded and stored within the SAMS computer program. Data is controlled in accordance with the Data Management Strategy.

This live data is constantly updated by work on the asset either operational or strategic.

Invest to Save Approach

Part Night Lighting Conversion

Part night street lighting is where some lamps are turned off between midnight and 5.30am or switched off completely. It was introduced between 2012 and 2015. During this time Derbyshire surveyed and risk assessed approximately 26,000 street lights. 8041 street lights were converted to part night operation.

Dimming Lighting

We also intend to dim lights in most locations unless a reduced level of lighting wouldn't be appropriate, for example in areas with an above average record of crime or safety concerns. Dimming of lights would be as follows:

Dusk to 21:30: 100% output

21:30 to 00:00: 75% output

00:00 to 05:00: 50% output

05:00 to 06:00:75% output

06:00 to dawn: 100% output

Switching is achieved by a one part electronic photocell operating at 20lux on 20lux off, unless an alternative switching arrangement is more suitable, for example a zebra crossing where it would be advantageous for the lighting to operate longer a 35lux on and 35lux off. One part cells will fit the three pin NEMA socket standard unless there is a history of vandalism or the luminaire is heritage style, in which case a mini-cell will be incorporated as part of the luminaire.

Conversion of all Street Lighting Assets to LED Technology

This should result in a total energy consumption of 15,500,000kWh by 2020. The residential element of this is to be completed by December 2019. Assets that are above 8m in height will be delivered April 2022. This includes 12,000 assets. This process includes:

- Visual inspection for condition
- Electrical testing inspection
- Assessed and either:
    - Replaced completely with a new tubular steel column and LED luminaire
    - Converted to LED where an LED luminaire is installed to the existing column
    - Highlighted for a formal structural inspection, and then based on the outcome will be subject to either of the above

Column Replacement Programme

Assets are replaced when they have reached the end of their serviceable life. The publication of GN22/19 will enable improvements in asset lifecycle planning for street lighting.

Safety Critical Refurbishment Programme

DEVELOPMENT AREA 7: Safety Critical Refurbishment Programme

Derbyshire are looking at starting a refurbishment programme for these assets, based on 5 per year, over the next 11 years.

11. LIFECYCLE PLANNING

DEVELOPMENT AREA 8: Creation of Lifecycle Planning

With the publication of GN22/19 Derbyshire would like to develop lifecycle planning.

Column information if currently held against each asset in CONFIRM including lantern install date.

Table 5: Street Lighting Asset Lifecycle Planning

Component	Typical Lifecycle
LED driver	12 year warranty from provider. Anticipated that it would burn to extinction and be more cost effective than cyclic replacement
LED luminaire for non-dimmed assets	25 years based on calculation of 100,000 total hours with dusk to dawn burning hours for East Midlands of 4101 per annum
LED luminaire for F02 dimmed assets	34 years based on calculation of 100,000 total hours and F02 dimming regime equates to 2971 burning hours per annum
Steel Lighting Column	To be completed as part of Development Area 8
Concrete Lighting Column	To be completed as part of Development Area 8

12. MAINTENANCE PROCESSES

There are three types of maintenance works undertaken:

(a) **Reactive maintenance**, covers the identification and repair requirements of safety defects generally resulting from either highway infrastructure asset safety inspections or reports received from third party sources such as police, members of the public, other council departments and the call centre. The relevant responses are itemised within the documents; Highway Infrastructure Asset Safety Inspection Manual and the Customer Road Fault Reporting. Reactive Maintenance Process Maps can be found in the Reactive Maintenance Teams Operational Manual.

Derbyshire are currently running a Burn to Extinction programme which will increase our revenue costs.

DEVELOPMENT AREA 9: Rationalisation of Replacement Programme

Before commissioning of work can occur Derbyshire are going to introduce a rationalisation approach whereby rationalisation occurs when there is no community or safety benefit. This will involve consultation with local parish council and member.

This development area is subject to the writing of a business plan and securing funding.

(b) **Routine or cyclic maintenance** is a process of preventative maintenance carried out on a cyclical basis to help reduce or eliminate failures and to ensure the system is operating at its intended design outputs.

There are no current cyclic maintenance programmes in place.

(c) **Planned or programmed works** occur when a need for an asset to be replaced has been identified. This could be via condition assessment, improvement schemes, LED invest to save project or following a RTC.

DEVELOPMENT AREA 10: Development of Planned Works Process Map

Planned works process maps are currently under review and need to be developed in the future.

DEVELOPMENT AREA 11: Cast Iron Column Policy

Street Lighting and Conservation are looking to devise a policy on the future maintenance of cast iron columns as they are more costly to maintain and may have an historical interest.

13. BACKLOG

There are 850 cast iron lighting columns in Derbyshire. Conversion to LED has been undertaken in some locations where possible, however as of June 2019, 550 have not been converted. Restoration of a cast iron lighting column and replacement LED luminaire costs significantly more than that of a standard specification column and LED luminaire.

Liaison with colleagues in conservation is necessary to ascertain which cast iron lighting columns are of significant historical interest and devise a restoration process. Those that are deemed to have little or no historical interest will be replaced with a standard specification lighting column and LED luminaire.

Estimating £2,000 for the restoration of the cast iron lighting column and £550 for a heritage style LED luminaire equates to a funding gap of £1,402,500.

There are currently 1,468 street lights mounted to third party assets, such as telegraph poles owned by local distribution network operators. These tend to be in more rural areas where there are no underground electricity cables. The DNO, Electricity North West have requested that third party attachments are removed from their assets. This equates to 550 pole mounted street lights, with an approx. replacement cost of £2,000 per pole bracket to lighting column. This equates to a funding gap of £1,100,000

14. VALUE MANAGEMENT/ENGINEERING APPROACH

DEVELOPMENT AREA 12: Adopting a Value Management/engineering Approach

Derbyshire would like to adopt a value management approach where by we take into account the benefits of undertaking maintenance and the risks of not undertaking maintenance which then provides a prioritised list for Value Engineering to ensure we

choose the optimal solution to ensure maintenance need is met while reducing waste and inefficiencies.

15. CROSS ASSET CONSIDERATION

When considering financial requirements Derbyshire will consider allocating budget to those assets that require more financial input regardless of where the money was originally allocated.

16. FORWARD PROGRAMME

The forward programme is available on the Derbyshire website.

The prioritisation of the schemes identified within the forward programme will be determined annually by available budget, condition and risk.

17. ANNUAL PROGRAMME

There is not currently an annual programme in place.

18. RISK REGISTER

A risk can be defined as an uncertain event which influences the desired performance of an asset. A risk factor is the produce of the severity of an event and the likelihood of its occurrence. Derbyshire County Council has a well-established risk management process that overarches all service areas.

The risk management process concentrates on four main issues, by applying these risk management principles, the council will be able to more appropriately target resources and to deliver services and projects in a way that ensures the council's overall exposure to risk is minimised.

The following risk register identifies risks and appropriate mitigation measures.

Table 6: Street Lighting Risk Register

Risk Level	Identify Risks	Evaluate Risk	Manage Risk
Strategic	Understanding the Asset	All street lighting assets have a unique identification number applied to the asset. The asset records holds comprehensive information on the asset which aligns with the requirements of Well Managed Highway Infrastructure.	The asset record is updated whenever works are undertaken, by either operatives on site or by business support and Engineering and Technical officers.
	Budget Concerns	Reducing revenue budget and increasing energy costs. Additional assets are obtained when developments are adopted.	County wide roll out of LED technology is underway to reduce energy consumption. LED street lights are pre-set to dim when footfall and traffic movements are reduced, further reducing the energy consumption.
	Changes to Traffic	As roads become busier, it is harder to safely undertake maintenance during the day	Trials of night shifts to undertake maintenance on traffic sensitive areas has proven successful.

		without temporary traffic management. This reduces productivity and increases cost.	Increased productivity has off set the additional pay for overtime.
	Climate Change	Energy consumed by the street lighting asset will add to the effects of climate change.	The energy payments includes a Climate Change Levy payment. The installation of LED technology has significantly reduced the energy consumption and reduced the effect of the asset on climate change.
Operational	Increase to asset stock due to developments	Increase in asset stock while revenue funding is decreasing. This will incur net gain on maintenance and energy liabilities.	Specification is to only install LED luminaires to reduce the energy liability, the column specification calls for galvanised steel columns with either a painted or thermoplastic coating to prolong column life.
	Electrical faults leading to lights out, electrical shock/fire risk	Poor/unauthorised workmanship on Derbyshire County Council assets. Christmas light attachments poses the most significant risk.	The Street Lighting Service operates an ISO9001 QMS. All wiring is carried out by trained competent operatives registered under NHSS8 HERS to the requirements of BS7671. No third party operatives are to carry out electrical work on Derbyshire County Council assets who are not registered with HERS. The street lighting service is a member of the NICEIC and audits of the workmanship is regularly undertaken
	Deterioration/corrosion resulting in structural failure of the asset		Programme of structural inspections to identify lighting columns requiring replacement.
	Unable to repair lamps due to manufacturer ceasing to manufacture low pressure sodium lamps in 2019	Increase cost of low pressure sodium lamps as they become harder to source, this could lead to delay in repairing assets with low pressure sodium lamps, in turn having a negative effect on KPI's	Invest to Save Project underway to remove low pressure sodium lamps from service
	Crank root lighting columns http://www.hse.gov.uk/safetybulletins/lampcolumns.htm	Crank root columns are used in locations where other underground services prevent a standard root column being installed. It can sometimes not be evident to other services and utilities that underground steel work is structural and any damage may result in column collapse.	Location of crank root columns recorded on Confirm. Warning notice applied on site to warn other utilities of the presence of a crank root column.
	Bridge deck columns	Shallow or flange plate foundations. Failure from	Design out the risk wherever possible by not placing lighting

		deterioration or RTC could impact on the road/railway/watercourse beneath. If the column is sited the other side of any safety fence maintenance cannot be undertaken without a closure on the road/railway beneath.	columns on bridge decks. Where this is not possible, site the column on the same side of the safety barrier as the road above. Consider utilising additional protection to mitigate the risk of vehicular impact. Carry out structural testing on existing assets where safe.

19. COMPETENCY AND TRAINING

Derbyshire County Council has an internal competency specification for all highway inspectors. This includes a tool box talk for street lighting requirements.

Derbyshire Street Lighting electricians are required to hold the competencies of Test01 and Test 02.

For structural testing Derbyshire use an UKAS accredited structural testing contractor who are also HERS registered for structural testing.

Visual inspections require no underlying training and is based on experience only.

All external contractors undertaking condition inspections are required to meet the same minimum Derbyshire specifications.

All inspection procedures, toolbox talks and risk assessments are reviewed, updated and then trained on an annual basis. The departmental code of practice is reviewed on a five yearly basis.

All competency and training requirements are based on the HERs competency framework which is referenced in Appendix F and managed through the Derbyshire County Council MyPlan system.

20. PERFORMANCE MANAGEMENT FRAMEWORK

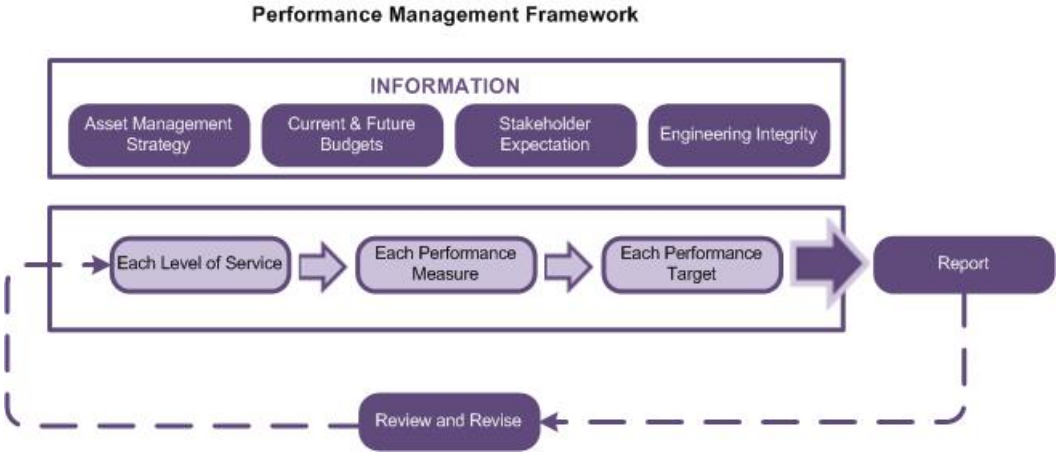
The Performance Framework is used as a tool to inform, measure, review and derive the management and decision-making processes associated with implementing corporate changes and day-to-day decisions relating to the delivery of services, linked to the network hierarchy. The figure below shows the performance management framework.

It is not intended that the Council creates a host of measurements that serve little purpose other than to demonstrate the presence of a framework. At any level, external-facing performance measures should show how well services are being delivered and whether objectives are being achieved.

Internally, a range of input and output measures may be used for monitoring purposes but the key indicators should reflect performance in key service areas to inform senior managers as well as corporate and stakeholders of the service as a whole.

The Performance Management Framework diagram is shown overleaf:

Diagram 2: Performance Management Framework



The table below shows the performance measures and targets for carriageway.

Table 7: Street Lighting Performance Indicators

Level of Service	Performance Measure	Level of Service 1 Resilient Network	Level of Service 2 Network Hierarchies 1 - 7
		Target	Target
Safety	Street light average repair time (response time is under control of DNO)	28 days	
	Street light average repair time (response time is under local authority control)	28 days	
	% of columns older than design life	30%	
	% of street lighting assets working at any given time	99%	
	% of condition inspections completed with tolerance levels	90%	
Serviceability	Emergency response times (2 hours)	90%	
Sustainability	Street Lighting General Maintenance ET10	£666,250	
	CO2 emissions	7000	
	Total energy usage (kWh)	14,850	
	Backlog	£0	£2,502.500
	% as-builts provided	100%	
	% asset inventory updated		
Customer Service	NHT % of residents satisfied overall with street lighting KBI 25	67%	
	NHT % of residents satisfied with the provision of street lighting HMBI 05	68%	
	NHT % of residents satisfied with the speed of repair to street lights HMBI 06	60%	

21. COMMUNICATIONS

This is covered within the separate Highways Communications Plan.

DEVELOPMENT AREA 13: Communications Between Staff via E-mail

Not all street lighting staff have access to email. Consideration needs to be given to ensuring that all staff have access to outlook to enable a prompt method of communication across the council.

22. CLIMATE CHANGE ADAPTION AND CIVIL EMERGENCIES AND SEVERE WEATHER EMERGENCIES PLANS

All plans relating to this area of work are included on the Derbyshire Prepared website and Derbyshire have taken or are taking action against all of the recommendations raised in the 2009 3 Counties Alliance Partnership The Effects of Climate Change on 3CAP's Highway Network Polices and Standards.

The corporate climate change manifesto can be found here.

23. HERITAGE AND CONSISTENCY WITH CHARACTER

Generic information that will relate to all assets and crosses all HIAM Part 2 documents and therefore are included in the Highway Network Management Plan.

24. CARBON REDUCTION

Generic information that will relate to all assets and crosses all HIAM Part 2 documents and therefore are included in the corporate Carbon Reduction Policy.

25. ENVIRONMENTAL IMPACT, NATURE CONSERVATION AND BIODIVERSITY

Generic information that will relate to all assets crosses all HIAM Part 2 documents and therefore are included in the Highway Network Management Plan.

26. SUPPLY CHAIN COLLABORATION AND COLLABORATION IN SERVICE DELIVERY

Street Lighting have tenders and frameworks in place for the procurement of goods and services. These have been developed alongside ETE or Corporate Procurement to ensure Derbyshire meet the requirements of Financial Regulations 2019.

Specifications for street lighting design and equipment is detailed in Appendix G.

27. DELIVERY

Street Lighting works are carried out by a combination of the in –house construction services and external contractors.

28. PROCUREMENT

Derbyshire use a variety of suppliers according to service need and locality requirements. We have an in-house service provider for construction works and we also use external providers which are sourced via a framework system.

29. OPERATIONAL POLICIES

Operational Policies are covered in the Highway Network Management Plan.

30. APPENDICES

APPENDIX A: DEVELOPMENT AREA SUMMMARY

Table 8: Development Area Summary

Development Area Number	Development Area Title	Action Taken
1	Desktop exercise of lighting columns on non DCC highway network	
2	Development of cross boundary agreements	
3	Defining other safety critical lighting column assets	
4	Updating the QMS Process Maps	
5	Desktop audit of illuminated signs and bollards	
6	Inspection Interval Development	
7	Safety critical refurbishment programme	
8	Creation of lifetime planning	
9	Rationalisation of replacement programme	
10	Development of Planned Works Process Map	
11	Cast Iron Maintenance Policy	
12	Adopting a value management/engineering approach	
13	Communications between staff via email	

APPENDIX B: NETWORK HIERARCHY FOR DETERMINING LIGHT LEVELS

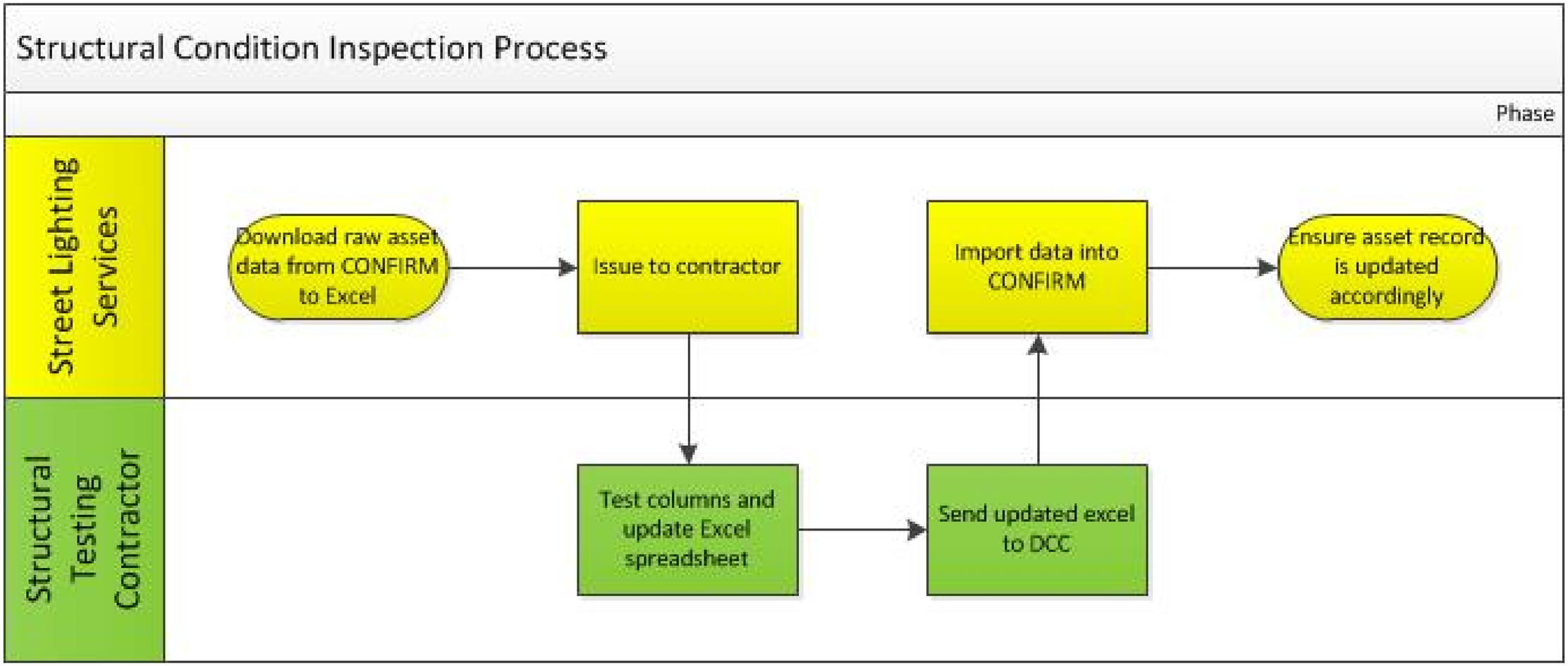
This can be found internally here.

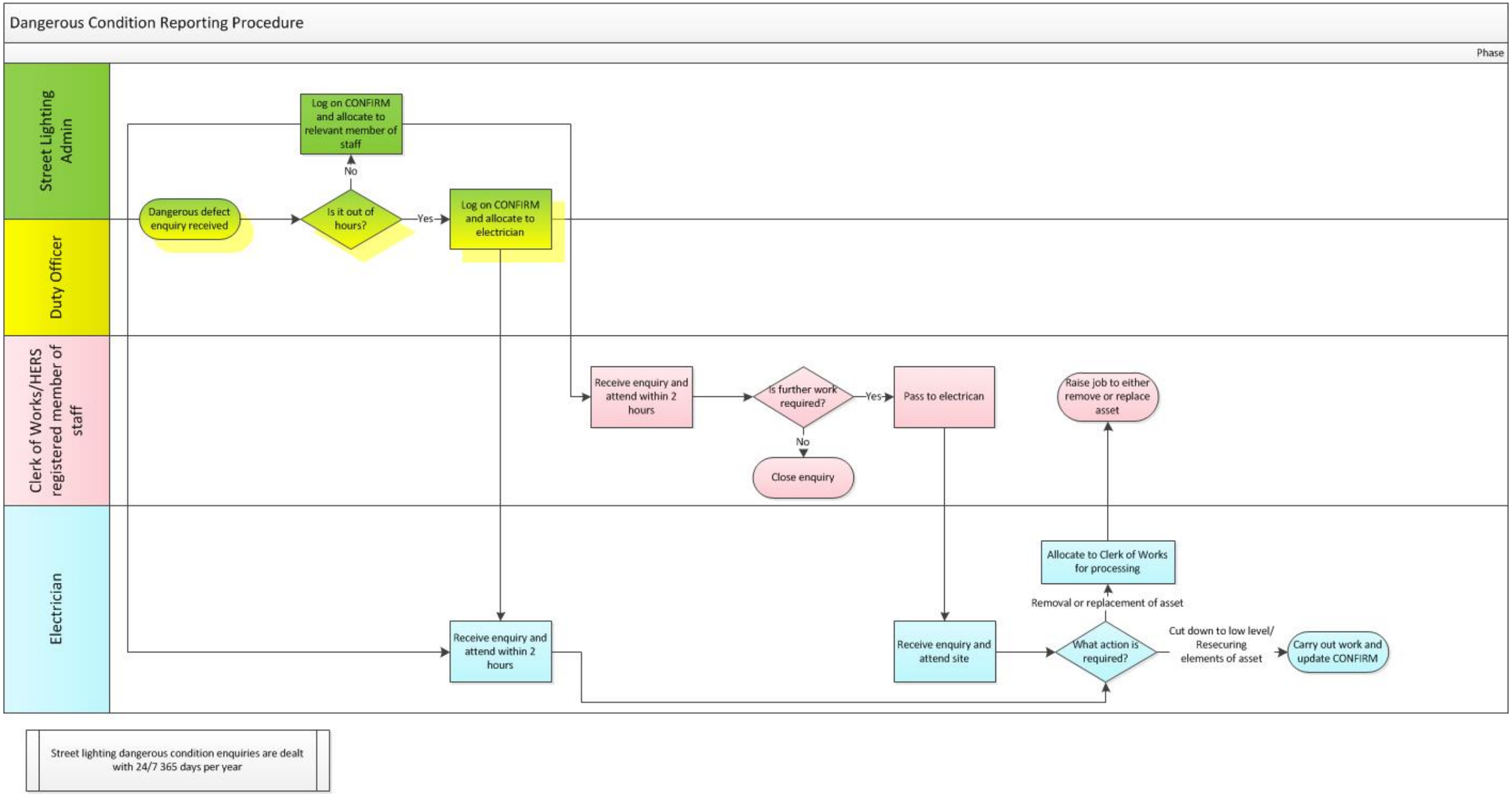
APPENDIX C: CRITICAL ASSETS ON THE RESILIENT NETWORK

Asset Type	Number on the RN
SL: DCC Circuit	1487
SL: Feeder Pillar	333
SL: Illuminated Bollard	925
SL: Illuminated Plate Attach	444
SL: Illuminated Sign	1426
SL: Lighting Column	9300
SL: Non-Illuminated Plate Attach	155
SL: Non-School Flasher	2
SL: Pedestrian Zebra Crossing	69
SL: Refuge Beacon	129
SL: School Amber Flasher	64
SL: Sign on a Bridge	9
SL: Subway Lighting	214
SL: Wall Mounted	142
TOTAL	**14,699**

APPENDIX D: PROCESSES

QMS processes will be added once Development Area 4 is completed.





APPENDIX E: INSPECTION INTERVALS FOR STREET LIGHTING ASSETS

This will be added once Development Area 6 is completed.

APPENDIX F: HERS COMPETENCY REQUIREMENTS

The HERS competency requirements can be found here.

APPENDIX G: STREET LIGHTING SPECIFICATION

The specification can be found internally here.

HIGHWAY INFRASTRUCTURE ASSET MANAGEMENT PLAN FOR TRAFFIC MANAGEMENT AND MANAGEMENT OF ELECTRONIC TRAFFIC EQUIPMENT

JANUARY 2020

AN ELEMENT OF THE HIGHWAY INFRASTRUCTURE ASSET MANAGEMENT SYSTEM

Document Information

Title	Highway Infrastructure Asset Management Plan for Traffic Management and Management of Electronic Traffic Equipment
Author:	Teri Ford/Bronwen Terry
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TABLE OF AMENDMENTS					
NO	**APPROVAL DATE**	**SECTION**	**PARAGRAPH**	**DETAILS**	**AUTHOR**
1	xx/xx/20xx	All	All	First Issue	

Contents

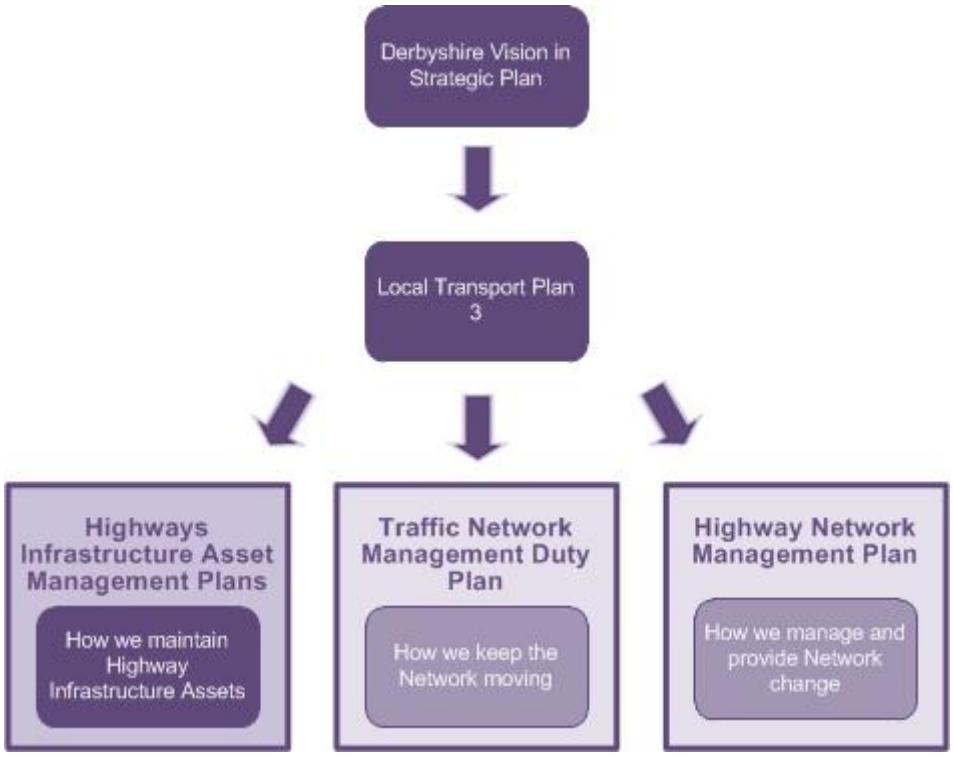
1. INTRODUCTION

This document provides the technical details that supports the Highways Infrastructure Asset Management Strategy and Plan and forms part of the Highways Infrastructure Asset Management suite of documents. It is a working document that provides the processes and information used internally by staff undertaking roles in delivery of service.

This document will recognise a number of Development Areas where Derbyshire has recognised potential improvements to the service they deliver. These development areas are aspirations only and will be reviewed on an annual basis to assess whether they are deliverable from a financial and resource perspective. A breakdown of these Development Areas can be found in Appendix A.

The following figure shows this document in context with other key documents in how the network is managed, maintained and changed:

Diagram 1: Plans and Policies Framework



2. SCOPE

This document covers the electronic traffic equipment on the Derbyshire highway network that Derbyshire have a responsibility to maintain. This includes traffic signals and crossing signals, vehicle activated signs, flashing amber warning lights, zebra crossings, fixed enforceable road safety cameras, traffic counters and real time bus information. It does not include those items maintained by third parties such as:

- Traffic signals at level crossings – Network Rail
- Fixed enforceable road safety cameras – Derby and Derbyshire Road Safety Partnership (DDRSP)

- Traffic signals on the trunk road/motorway network – Highways England
- Car park monitoring and information – District/Borough Council/businesses
- Closed circuit television – Districts/Borough Council

3. ASSET CAUSES OF DETERIORATION

The main causes of traffic management deterioration are itemised below:

Table 1: Deterioration and Associated Defects

Cause of Deterioration	Description	Typical Defects
Weathering	Damage from wind action, water ingress and freezing	Deterioration of plastics, rubber seals, coatings to poles. Corrosion of metals
Degree of exposure of the site	Sites in exposed locations are at higher risk of severe weather conditions eg greater wind loading	Deterioration of plastics, rubber seals, coating to poles. Corrosion of metals
Vegetation, overhanging trees	Dirt and dust adhere to assets due to leaf sap and other residues	Illegible signs, obscured signals
Rutting in carriageway	Plastic deformation of bituminous construction layers	Damage to loops
Vandalism/Graffiti	Spray painted words, bending of sign face, damage to brackets	Sign illegible
Ageing	Assets approaching end of design life, affected by sunlight	Fading/signs illegible
Salting	Assets can be damaged by excess salt spray	Screen cracking
Road Traffic Accidents	Assets damaged by collisions	Damage to weather stations

4. NATIONAL/LOCAL GUIDANCE AND RELATED DOCUMENTS

The maintenance of electronic traffic equipment is governed by a series of national documents and guidance including:

- Well Maintained Highways A Code of Practice 2016
- Management of Electronic Traffic Equipment A Code of Practice (22 September 2011)
- DMRB – Volume 8 Traffic Signs and Lighting Section 1 Traffic Signals and Control Equipment Part 2 TD 24/97
- MCH 1540 Loop Detectors Standards for Highways
- Traffic Management Act

These documents are held on the internet and the links are above.

This document is a live document that will be reviewed biannually or whenever a significant change is required to any of the processes or procedures documented within it.

5. LEVELS OF SERVICE AND CRITICAL ASSET IDENTIFICATION

The Highways Infrastructure Asset Management Policy, Strategy and Plan have developed and documented the overarching Levels of Service derived from the authority's statutory duties, the national and regional guidance, the management and mitigation of risk both to the service user and the authority and the volume and type of traffic using the network.

The Levels of Service that define the Council's approach to the management of the carriageway assets have been defined against the Network Hierarchy and the Resilient Network. These can be found online here. There are two levels of service in regards to safety on the network due to budgetary constraints. Levels of Service will be reviewed and amended regularly to take into account the budgetary position. This asset group is important in that it is supportive of the goals and objectives relating to the promotion of walking and cycling and improving accessibility. Some signals have been installed as a direct result of casualty reduction objectives. The carriageway critical assets are defined as those on the resilient network and the network hierarchy.

The table overleaf shows how the Levels of Service relate to the different network hierarchy levels:

Table 2: Traffic Management and Management of Electronic Traffic Equipment

	Traffic Management on Resilient Network and Critical Assets (x% of total assets – Development Area 1)	Traffic Management on Network Hierarchies 1 to 7 (x% of total assets – Development Area 1)
	Level of Service 1	**Level of Service 2**
	Safety + Serviceability + Sustainability + Customer Service	**Provision of safety related issues and Customer Service only**
Objective	Comply with statutory obligations and to provide Network Safety and customer service RN to be prioritised to ensure availability and minimise costs where budgets allow	Comply with statutory obligations and to provide Network Safety and customer service
Standard	Comply with Code of Practice and apply asset management techniques to optimise whole life costs.	Comply with Code of Practice and apply asset management techniques to optimise whole life costs.
Impact/ Risks/ What it means	Programme of inspections and determination of condition. Lifecycle planning and programme to tackle backlog of improvements. Conversion of assets to LED technology where appropriate. Safety inspections and identified safety defects prioritised according to risk based approach. Officer observation and all other non-safety repair requests added to the programme to be dealt with in accordance with the timescales set out in the HIAMP. All signals to be maintained to highest standard and capable of operating in vehicle-actuation mode Signal timings to be reviewed a minimum of once a year.	Programme of inspections and determination of condition Lifecycle planning leading to 3-10 year forward programme with prioritised annual programming. Predominantly reactive maintenance Minimal intervention to prevent asset deterioration Safety inspections and identified safety defects prioritised according to risk based approach. Likely increase in non-safety defects with potential for increase in third party insurance claims.

DEVELOPMENT AREA 1: Full Asset Capture

There is currently a lack of complete asset information to enable allocation of assets to levels of service. Once full asset capture is completed this will be a possibility.

6. IDENTIFICATION OF NEW ASSETS - DATA CAPTURE

Table 3: Processes to Identify and Record New Assets

Asset Type	Resilient Network & Critical Assets Level of Service 1	Network Hierarchy 1 – 7 Level of Service 2
Traffic Signals	Traffic Signals team to add to database as part of scheme commissioning procedure	
Flashing Amber Warning Lights (FAWLS)	Street Lighting team to add to the database and carry out random checks of newly commissioned lights.	
Zebras	Development Area 2	
Vehicle Activated Signs (VAS) on speed cameras	Development Area 3	
Fixed road safety cameras	CREST determine if needs adding to network	
Real Time Passenger Information	PTU officers identify sited based on usage and suitability	
Car Parking Metres	Development Area 4	
Traffic Monitoring Equipment	These are requested as part of a scheme and if a desktop survey identifies a lack of information around a certain area	
Weather Stations	This is carried out in house as and when required.	
Rising Bollards	Development Area 5	
CCTV	Development Area 6	

DEVELOPMENT AREA 2: Zebra Crossing Digitisation

All Zebras need to be recorded within database to allow asset control and lifecycle planning.

DEVELOPMENT AREA 3: Speed Camera Digitisation

Currently limited data on speed cameras. Road Safety to send all digitisation upgrade to traffic signals team.

DEVELOPMENT AREA 4: Car Parking Metres in Introduction

Currently car parking metres are not recorded on our asset management system. These are to be added to CONFIRM in a similar way that lighting assets are added.

DEVELOPMENT AREA 5: Rising Bollards Introduction

Rising Bollards are not currently a Derbyshire assets but will become one of Derbyshire's assets within the next 12 months. Once this happens lifecycle planning, inspection and maintenance processes will be incorporated into this document.

DEVELOPMENT AREA 6: DHHART (Derbyshire Highways Hub Real Time Information) Project:

The DHHART project will initiate the use of technology to increase the visibility of the network and improve communications. This will involve the use of Close Circuit TV (CCTV).

7. INVENTORY UPDATE AND ASSET CAPTURE

Electronic traffic management and traffic equipment have already got a fully updated asset inventory.

8. AS BUILTS PROCESS AND DATA CAPTURE

All traffic signals have an as built drawing kept onsite. Development Control processes will support the gathering of new as built information for new developments.

9. INSPECTIONS AND SURVEYS

The following documents are to be referenced and followed when undertaking any site work:

- DCC Emergency Information Handbook

Traffic Signals Inspections

Traffic Signals assets are inspected twice yearly to ensure they remain safe for public use. The inspections also provide the data required to support good asset management practice. Inspections are conducted by a number of methods:

- visually by the inspector with evidence gathered using photographs
- electronic testing

DEVELOPMENT AREA 7: Permanent Sites Inspections Using CONFIRM

Derbyshire aspire to hold all permanent site inspection routes within CONFIRM.

DEVELOPMENT AREA 8: Increasing Inspections

Non signals electronic traffic equipment is not currently inspected regularly. Derbyshire would aspire to inspect these assets annually.

The procedures to complete an inspection of traffic signals by these methods and to input the resultant data are found in Appendix B. Non signals electronic traffic equipment will have procedures written once Development Area 8 is instigated.

Speed Camera Inspections

Speed cameras are inspected on rolling basis annually by the camera provider. Power issues for these are reported to the relevant council. Housing units are also included in these inspections.

Permanent Traffic Monitoring Site Inspections

The current process map for inspecting permanent sites can be found in Appendix B. Inspections cover checks on all equipment including SIM cards.

Car Parking Metre Inspections

The inspection of car parking metres is currently managed by district and borough councils. See Development Area 9.

DEVELOPMENT AREA 9: Car Parking Metre Inspections

Derbyshire would like the inspection of car parking metres brought in house.

DEVELOPMENT AREA 10: One Single Asset Management System

Derbyshire would like to move to just using one system – CONFIRM – for storing signals and traffic monitoring data.

Highway Infrastructure Asset Safety Inspections

Safety inspections are undertaken by Highway Inspectors and are designed to identify, assess, record and prioritise the repair of identified safety defects which may present an immediate danger or significant inconvenience to users of the highway. The information detailing the processes involved in completing safety inspections and the risk based approach to safety defect assessment and repair are detailed in the Highway Infrastructure Asset Safety Inspections Manual.

The Inspections Manual acknowledges that the Highway Inspectors do not possess the specialist knowledge required to risk assess any safety defects identified. Therefore the process allows for an initial make safe situation with all defects forwarded to the Traffic Signals section for risk assessment and prioritisation for reactive repair.

Commissioning Inspection /equipment

At the point where a new electronic traffic equipment asset has been identified an initial inspection will be undertaken. The information gathered will depend on the asset type. For traffic signals Appendix B shows the desired process if Development Area 10 is implemented. Appendix C is the relevant forms that need to be completed during

commissioning inspections. For traffic monitoring equipment, information relating to new assets is provided to the strategy scheme on completion.

Enquiry/Adhoc Inspection

As a result of a highway safety inspection requesting investigation into a recorded safety defect or due to a customer enquiry, an adhoc inspection may be undertaken of an electronic traffic management asset. The inspection includes the entire asset.

The following document should be followed:

- Traffic Management and Management of Electronic Traffic Equipment Procedures for dealing with calls reporting Traffic Signal issues See Appendix B.

  DEVELOPMENT AREA 11: Timings of Inspections

  A rolling programme of inspections is required to take into account customer enquiries regarding the signal timings and to ensure reviews of AM and PM peak times take place.

Traffic Control Maintenance Technician Inspection

An inspection is conducted by the Authority's maintenance technician on an annual basis.

The inspection regime follows the Management of Electronic Traffic Equipment A Code of Practice (22 September 2011) and Design Manual for Roads and Bridges TD24.

The output from each inspection is an inspection record sheet kept in the site maintenance files and are held by the Traffic Control Section – any faults identified are attended to under the reactive maintenance procedure and an overall assessment score is stored within the Signals Database lifecycle planning program.

This process covers signals only.

Maintenance Contractor Engineer Inspection

An inspection is conducted by the Authority's maintenance contractor's engineer on an annual basis.

The inspection regime follows the Management of Electronic Traffic Equipment A Code of Practice (22 September 2011) and Design Manual for Roads and Bridges TD24.

The output from each inspection is an inspection record sheet kept in the site maintenance files and are held by the Traffic Control Section – any faults identified are attended to under the reactive maintenance procedure and an overall assessment score is stored within the Signals Database lifecycle planning program.

This process covers signals only.

Electrical Testing Inspection

Every site is tested for electrical safety on a 5 yearly basis. Records are kept in the site maintenance file in the Traffic Control office. Assets covered by electrical testing also include solar and wind powered assets. Street Lighting electricians will be carrying out electrical testing on the assets not currently tested via the external contract.

DEVELOPMENT AREA 12: Electrical Testing Contract

When the electrical testing contract is due for renewal consideration could be given to adding in all TM electrical assets to the testing regime. Consideration could be given to increasing the inspections to at least every 5 years.

Other Inspections

Specific surveys are undertaken if needed to supplement the inspection data where an inspection identifies particular issues potentially needing attention. Sites for further inspection are identified from the condition information detailed in the Periodic Inspection Data. Derbyshire technicians carry out site inspections on our permanent traffic monitoring equipment. Derbyshire also carry out online diagnostics of asset traffic monitoring equipment to show condition data. Derbyshire also commission external surveys and inspections of our traffic monitoring equipment.

DEVELOPMENT AREA 13: Remote Monitoring

There are certain assets that are remotely monitored. These include traffic signalled junctions and crossings. There is a need to upgrade the systems to enable remote monitoring to be cloud based.

Real Time Traffic Information Sites Inspections

Real time traffic information sites are inspected purely on a reactive basis to enquiries but can have occasional visits from maintenance contractors to check systems are working correctly.

Weather Station Maintenance Inspections

Weather station have an annual maintenance inspection by an external company.

Non-inspected Assets

Flashing Amber Warning Lights (FAWL's), weather stations, parking metres, speed cameras and Vehicle Activated Signs (VAS's) currently have no inspections and are only dealt with when reported by a member of the public.

10. ASSET CONDITION AND ASSESSMENT

Condition

The County Council monitor and record the condition of the asset through:

- The inspections as part of the maintenance and inspection element of the managing/maintenance contract
- Equipment age
- Equipment functionality (fitness for purpose)
- Compliance with latest standards and legislation

Assessment

Traffic Signals Assessment

Any faults identified in an inspection are attended to and a score provided for consideration in relation to the future renewal programme. Some sites (approximately 150) are equipped with remote fault monitoring.

In general, the condition assessment is an amalgamation of the above reports and observations by the Authority, the equipment supplier, and where applicable, information collected by the managing/maintenance contractor.

Priority in terms of treatment is identified by using a condition score with associated objective commentary. This results in a recommendation of priority for treatment.

DEVELOPMENT AREA 14: Increasing Signal Timings Assessments

Policy states that each set of signals timings is assessed on an annual basis. Given more resource Derbyshire would like to be able to increase the signal timings assessments.

Traffic Monitoring Mobile Sites Assessment

Temporary Mobile Sites are not regularly condition assessed as they are only on site for a limited time. There are various checks included when equipment is installed. Radar units are calibrated when required using a hand held radar gun. This is completed on site. The radar gun is calibrated in house by Derbyshire. If issues arise with the SDR units then they will be sent to the manufacturers once a certain number require intervention. Miovision cameras do not have a specific calibration timescale but issues are raised directly with the provider when required.

11. LIFECYCLE PLANNING

There is an increasing realisation that traffic signal and information systems have become a key element in implementing schemes which will meet Local Transport Plan targets. Thus the equipment population is increasing at an increasing rate. It is therefore essential to ensure that a robust Lifecycle Management Plan is developed for traffic control systems so that revenue investment is allocated to meet the needs identified in the plan.

A simple deterioration model has been applied for lifecycle planning within the Signals Database. Deterioration is affected by a number of factors including quality/type of kit, weathering exposure and amount of traffic usage. The starting score for every asset is 20 and is amended after each inspection. Intervention occurs when an asset reaches a score of 4 – 5.

Lifecycle planning for permanent traffic monitoring equipment is based on a database which records all end of life data using supplier recommended product life. Once equipment reaches the end of its shelf life then the equipment is assessed and the date can be adjusted dependent on condition.

The table overleaf shows lifecycles for all our Traffic Management assets:

Table 4: Lifecycles of TM assets

Structure Type	Lifecycle
Traffic Signals	15 – 20 years
Flashing Amber Warning Lights (FAWLS)	10 - 15 years – See Development Area 15
Zebras	11 years – See Development Area 18
Vehicle Activated Signs (VAS) on speed cameras	10 years
Fixed road safety cameras	Not feasible to state as through the digitisation process the cameras have had numerous parts replaced which have extended the lifecycles of the cameras
Fixed road safety camera housing units	Unless damaged these assets are expected to never require replacement
Real Time Passenger Information	10 – 15 years
Car Parking Metres	No current lifecycle planning completed See Development Area 16
Permanent Traffic Monitoring Equipment	10 years
Weather Stations	No current lifecycle planning completed. If inspections raise issues then upgrades are funded by capital funding.

Temporary traffic monitoring equipment is not lifecycle planned and simply serviced/calibrated when required.

Derbyshire consider traffic signals lifecycle planning as a whole asset including the tactile paving, zig zag lines and the entire asset including the loop and the signal head. Derbyshire have identified 100 sites and the methodology to inspect these are included in Appendix B.

DEVELOPMENT AREA 15: Upgrading FAWLS

FAWLS currently have a lifecycle plan of 10 - 15 years and each asset requires programming annually. Consideration needs to be given to purchasing the software to programme these assets automatically or to hand the control of FAWLS to local schools.

DEVELOPMENT AREA 16: Replacement of Car Parking Metres

Derbyshire aim to replace all parking metres within the next 5 years to ensure lifecycle planning is feasible.

DEVELOPMENT AREA 17: Upgrading Traffic Monitoring at Weak Bridges

Derbyshire aspire to upgrade all permanent traffic monitoring equipment on weak bridges to enable monitoring of HGV usage where required. This will involve consultation with structures team to identify potential locations.

DEVELOPMENT AREA 18: Cross Asset Considerations

Zebra Crossings: A Derbyshire aspiration is to consider the Zebra crossing asset as a whole in terms of replacement including the tactile paving, lines and beacons. As part of this aspiration Derbyshire have identified 100 sites where an annual inspection and upgrade to halo lighting would be improve the service.

Current Ages of Assets

The table below shows the current age of all the assets:

Table 5: Asset age

Equipment	Equipment Age				
	0-5 years	6-10 years	11-15 years	16-20 years	20 years +
Traffic Signals	30	24	28	47	
Pelican Crossing	0	0	0	10	
Puffin Crossing	46	72	96	49	
Toucan Crossing	6	4	6	9	
Pegasus Crossing	1	2	2	2	7
Zebra Crossing	122	46	10	15	46
Permanent Electronic Warning Signs	39	77	54	3	
Mobile Electronic Warning Signs	0	43	24	0	
Flashing Amber Warning Signs		402			
Real Time Passenger Information	136				
Fixed road safety cameras DA	See note below*				
Fixed road safety camera housing units	17		12	4	34
Car Parking Metres		9	21	12	
Traffic Monitoring Equipment Miovision Cameras	8				
Traffic Monitoring Equipment SDR units	11	10		24	
Traffic Monitoring Equipment Speed Guns	2			2	
Weather Stations	3			4	

*The Crest 10 road safety cameras were upgraded in 2017/18 however they do use parts that have been replaced over a number of years which makes it difficult to age the camera's themselves

Gross Replacement Costs are based on similar asset installations in recent years.

12. MAINTENANCE PROCESSES

There are three types of maintenance works undertaken:

(a) **Keeping the Asset Safe (Reactive maintenance):**

- **Traffic Signals**: prompt repair of any equipment that fails under normal working conditions. Prompt repair in the case of accident damage or vandalism. Also, failure of signals, necessitating the emergency callout service. The response times for reported incidents are held in the Highways Infrastructure Asset Safety Inspection Manual. Repairs are categorised into immediate and routine faults. Urgent faults are those which could have a significant impact on the travelling public, for example, signals all out, red lamps not working etc. All other faults are classified as routine. Immediate faults should be attended within 2 hours of receipt of the fault report whilst routine faults should be attended within 8 hours. Reactive Maintenance Process Maps can be found in the Reactive Maintenance Teams Operational Manual.
- **FAWL assets:** the contractor will wait until a number of assets have failed and then charge a day rate to repair them all in one day
- **Real Time Passenger Information:** Maintenance of real-time passenger information sites are commissioned to an external contractor to respond and fix malfunctioning or damaged units.

DEVELOPMENT AREA 19: Amendments to Traffic Signals Maintenance Contract

In the next contract for signals maintenance Derbyshire would like to stipulate timings for actual repairs to faults as there are no current set timings.

(b) **Keeping the Asset Serviceable (Routine maintenance):** Periodic inspections and servicing are required on the traffic signal installation to ensure it is operating safely and efficiently. Each site has the equipment cleaned a minimum of once a year.

(c) **Maintaining and Improving the Asset (Planned or programmed works) includes the refurbishment programme:** preventative maintenance on a regular basis of the signal installations which includes repair or replacement of all components of lantern assemblies, posts, mast arms, controllers and cabinets, vehicle detection systems and all interconnecting cabling to ensure continued efficient operation. Additionally it includes a programme of refurbishment that address sites where, due to age or outdated equipment, the future reliability of a site could be at risk. This also includes sites where there is a need to upgrade to improve traffic flows through a junction. On-going replacement needs are driven by age, outdated equipment and deterioration of condition/reliability. Current funding levels allow for the retrofitting of LED units onto existing equipment. Site around 12 years old do not benefit from this as the anticipated 20 year lifecycle does not make it viable. The refurbishment programme will include a review of whether the traffic signals are still required. Refurbishments consist of industry standard equipment based on type and layout of asset.

DEVELOPMENT AREA 20: Development of Planned Works Process Maps

Planned works process maps are currently under review and need to be developed in the future.

All maintenance of car parking metres is split across districts. There is an external contract for Chesterfield metres, Derbyshire Dales maintain Bakewell metres and High Peak maintain Buxton and Castleton.

13. BACKLOG

Table 6: Traffic Signals Backlog

Year	Number of assets due for replacement/refurbishment	Amount required (£)
Year 1 (2018 work not completed)	9	£580,000
Year 2 (19/20)	6	£655,000
Year 3 (20/21)	13	£780,000
Year 4 (21/22)	13	£780,000
Year 5 (22/23)	8	£780,000
Year 6 (23/24)	10	£780,000

DEVELOPMENT AREA 21: Calculating the FAWLS Backlog

This information is still to be captured.

Traffic Monitoring Equipment Permanent Sites

This is based on replacing equipment after 10 years. However, year 1 does have a number of sites that are older than 10 years. Lifecycle planning for these assets allow for a condition assessment at 10 years and then the lifespan can be extended if suitable. The backlog is based on the replacement of the recorder only.

Table 7: Traffic Monitoring Equipment Permanent Sites Backlog

Year	Number of assets due for replacement	Amount required (£)
Year 1	8	£10,000
Year 2	3	£2950
Year 3	18	£21,300
Year 4	69	£75,850
Year 5	15	£12,750

Lifecycle planning does not take place for Traffic Monitoring equipment at temporary sites and therefore backlog cannot be calculated.

Derbyshire are unable to specify costs for car parking metres at this point in time as this differs according to which district or borough are responsible. Once Development Area 4 is implemented this will then be possible.

As referred to in Development Area 18 Derbyshire plans to look at the asset as a whole as opposed to individual parts of the assets. For example, traffic signals will look at the whole installation including the signal equipment, white lining and tactile paving.

DEVELOPMENT AREA 22: Completing the Asset Database and Inspection Assessment in CONFIRM

It is planned that the asset database and inspection assessments will be implemented within Confirm before the end of the year. This will allow for the collection of the desired costings broken down to network hierarchy level. This will also allow Derbyshire to specify projected funding requirements.

14. VALUE MANAGEMENT/ENGINEERING APPROACH

DEVELOPMENT AREA 23: Adopting a Value Management/Engineering Approach

Derbyshire would like to adopt a value management approach whereby we take into account the benefits of undertaking maintenance and the risks of not undertaking maintenance which then provides a prioritised list for Value Engineering to ensure we choose the optimal solution to ensure maintenance need is met while reducing waste and inefficiencies.

15. CROSS ASSET CONSIDERATION

When considering financial requirements Derbyshire will consider allocating budget to those assets that require more financial input regardless of where the money was originally allocated.

16. FORWARD PROGRAMME

A forward works programme of 5 years has been maintained and is published on the Derbyshire website. This is updated annually based on more current information about the asset and of other schemes which may affect the asset and is therefore subject to change at this point.

Potential schemes are identified and prioritised using a variety of data: Condition assessment records, requirements for new facilities, maintenance issues raised by Maintenance Contractor and knowledge of other schemes which may affect the programme.

The prioritisation of the schemes identified within the forward programme will be determined annually by available budget, condition and risk.

Rationalisation of current FAWL assets is to take place over the next few years to inform a new maintenance contract.

17. ANNUAL PROGRAMME

The first year of the 5 year forward works programme forms the annual programme.

The programme is decided the previous year for all asset groups and at this point it provides some opportunity for co-ordination of works. Larger schemes which encompass several asset groups naturally lead to better co-ordination.

18. RISK REGISTER

A risk can be defined as an uncertain event which influences the desired performance of an asset. A risk factor is the produce of the severity of an event and the likelihood of its occurrence. Derbyshire County Council has a well-established risk management process that overarches all service areas.

The risk management process concentrates on four main issues, by applying these risk management principles, the council will be able to more appropriately target resources and to deliver services and projects in a way that ensures the council's overall exposure to risk is minimised.

The risk register overleaf identifies risks and appropriate mitigation measures:

Table 8: Risk Register

Risk Level	Identify Risks	Evaluate Risk	Manage Risk
Strategic	Understanding the Asset	Sound understanding and records of existing assets are in place	Maintain existing systems to manage risk
	Budget Concerns	The absence of relevant finances will lead to deterioration and compromises the safety on the networks	Budget management and apply for additional funding where feasible Lifecycle planning Budget Management
	Changes to Traffic	Changes to traffic patterns and the usage of road may alter network prioritisation of asset stock	Pre-empt network changes or travel patterns at the design and planning stages
	Climate Change	Increase in the rate of replacement of existing assets	Analysis of existing asset stock to establish the need for the asset Rationalisation exercise of assets to consider future asset reduction
Operational	Increase in cyclist movements, resulting in more crossings required to be cyclist friendly	Increase in potential conflict of different types of road user. Increase of asset stock incurring additional maintenance costs.	Apply mitigating measures to reduce conflict. Promote education of road safety. Install crossings where appropriate and justified.
	Utility activity physically damaging asset	Ambiguous operation of signals to all users. Downtime of signal stock. Additional costs associated with repairs.	Appropriate noticing of temporary works to enable liaison of personnel. Installation of new signal assets remote from utility apparatus.
	Increase to asset stock due to developments and safety schemes	Increase in maintenance and energy costs.	Ensure appropriate funding in place both from revenue and commuted sums.
	Balancing increasing demands and delays at signalised locations	Unnecessary delays causing driver frustration. Negative financial impact on economy.	Annual inspection of signals at peak times to ensure correct strategy of control in place. Appropriate funding in place to achieve lifecycle requirements.
	Increase in energy costs	LED reduces energy use by approximately 60%	Cost to change all signal heads to LED technology

DEVELOPMENT AREA 24: Adding All Signals Risk Assessments to the Entire Resilient Network

Traffic Signals are to update risk assessments to include the entire resilient network and whether temporary signals need to be erected on site when permanent lights fail.

19. COMPETENCY AND TRAINING

The Council's maintenance technician is trained in operation of all types of signals and also in the use of a handset for interrogation of the controller equipment. The maintenance contractor's engineer is also electrically trained.

All competency and training requirements are based on the HERs competency framework which is referenced in Appendix D and managed through the Derbyshire County Council MyPlan system.

20. PERFORMANCE MANAGEMENT FRAMEWORK

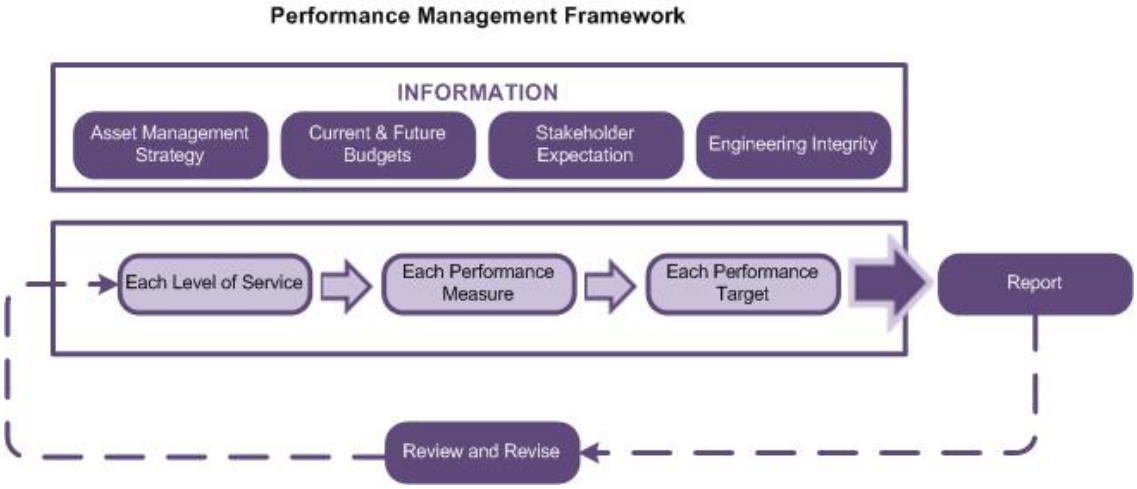
The Performance Framework is used as a tool to inform, measure, review and drive the management and decision-making processes associated with implementing corporate changes and day-to-day decisions relating to the delivery of services, linked to the network hierarchy. The figure below shows the performance management framework.

It is not intended that the Council creates a host of measurements that serve little purpose other than to demonstrate the presence of a framework. At any level, external-facing performance measures should show how well services are being delivered and whether objectives are being achieved.

Internally, a range of input and output measures may be used for monitoring purposes but the key indicators should reflect performance in key service areas to inform senior managers as well as corporate and stakeholders of the service as a whole.

The Performance Management Framework diagram is shown overleaf:

Diagram 2 Performance Management Framework



The table overleaf shows the performance measures and targets for traffic management.

Table 9: Performance Measures and Targets

Level of Service	Performance Measure	Level of Service 1 Resilient Network	Level of Service 2 Network Hierarchy
		Target	Target
Safety	Percentage of condition inspections completed with tolerance levels (monthly)	100%	
	Percentage of traffic signals faults resolved in a single visits	100%	
	Percentage of urgent signal reports responded to within 2- 8 hours between 6am – 8pm	100%	
	Percentage of non urgent signal reports responded to within 8 hours of notification	100%	
Serviceability	Average overall repair time for all electronic traffic equipment	3 months	
Sustainability	Backlog	Part of Development Area 21	
	% as-builts provided	100%	
	% asset inventory updated		
Customer Service	NHT % of residents satisfied with location of permanent traffic lights TCBI 09	72%	
	NHT % of residents satisfied with waiting times at permanent traffic lights TCBI 10	67%	

21. COMMUNICATIONS

This section is relevant for all plans therefore should it be separate: covered under the Highways Communications Plan.

22. CLIMATE CHANGE ADAPTION AND CIVIL EMERGENCIES AND SEVERE WEATHER EMERGENCIES PLANS

All plans relating to this area of work are included on the Derbyshire Prepared website and Derbyshire have taken or are taking action against all of the recommendations raised in the

2009 3 Counties Alliance Partnership The Effects of Climate Change on 3CAP's Highway Network Polices and Standards.

The corporate climate change manifesto can be found here.

23. HERITAGE AND CONSISTENCY WITH CHARACTER

Generic information that will relate to all assets and crosses all HIAM Part 2 documents and therefore are included in the Highway Network Management Plan.

24. CARBON REDUCTION

Generic information that will relate to all assets and crosses all HIAM Part 2 documents and therefore are included in the corporate Carbon Reduction Policy.

25. ENVIRONMENTAL IMPACT, NATURE CONSERVATION AND BIODIVERSITY

Generic information that will relate to all assets and crosses all HIAM Part 2 documents and therefore are included in the Highway Network Management Plan.

26. SUPPLY CHAIN COLLABORATION AND COLLABORATION IN SERVICE DELIVERY

Term Maintenance Contract

Works on this asset group are impacted by considerations relating to normal traffic sensitive conditions. Therefore, the target is to ensure that this asset will always be in full working order for the peak traffic times, or will be replaced with a suitable temporary replacement.

Framework agreements are in place for the procurement of traffic signal retention sockets.

DEVELOPMENT AREA 25: New Framework for Signal Equipment Provision

Consideration needs to be given to creating a framework agreement for the supply of signal equipment for routine repairs by internal workforce.

27. DELIVERY

Electronic Works on the highway are delivered by a combination of external contractors and in-house services.

28. PROCUREMENT

Derbyshire use a variety of suppliers according to service need and locality requirements. We have an in-house service provider for construction works and we also use external providers which are sourced via a framework system.

DEVELOPMENT AREA 26: Procuring an External Contract for Traffic Monitoring Tubes

Derbyshire would like to remove Derbyshire tubes from the traffic monitoring asset list and procure an external provider for this service.

29. OPERATIONAL POLICIES

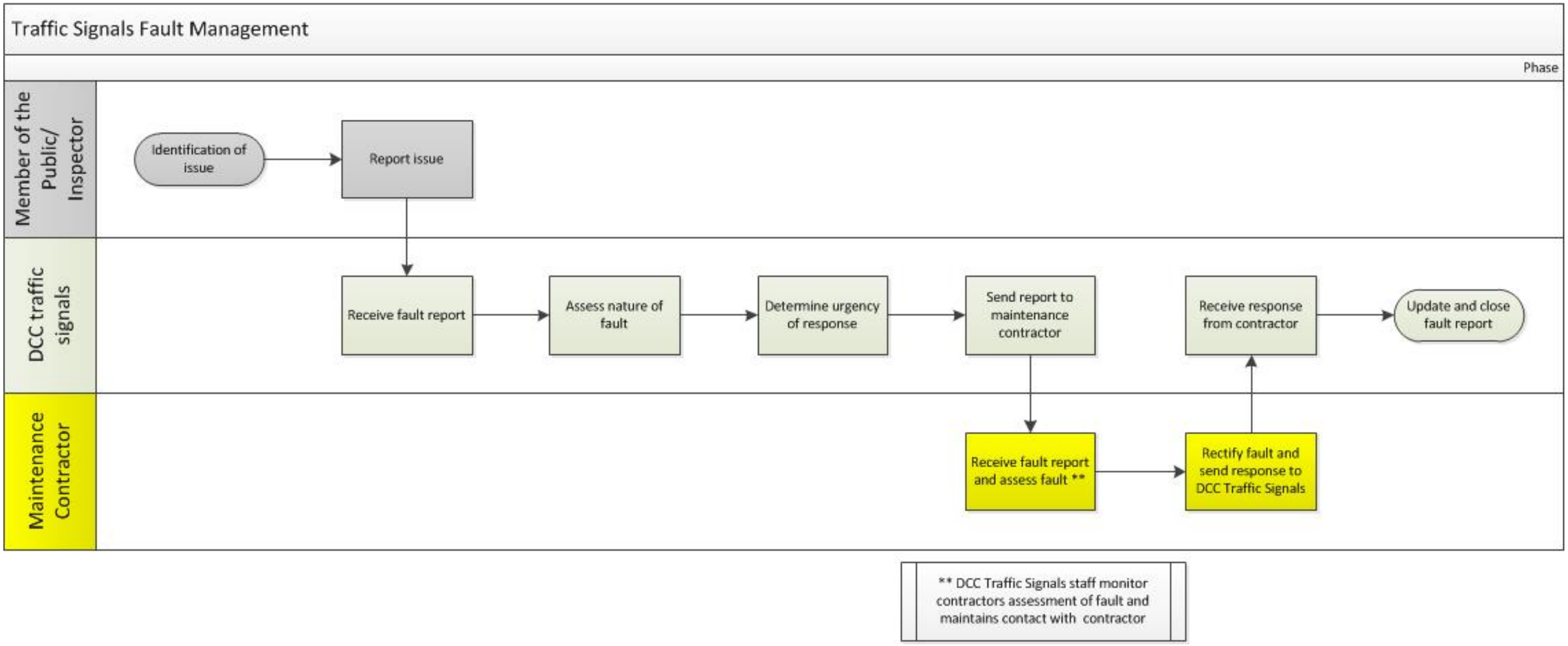
Operational Policies are covered in the Highway Network Management

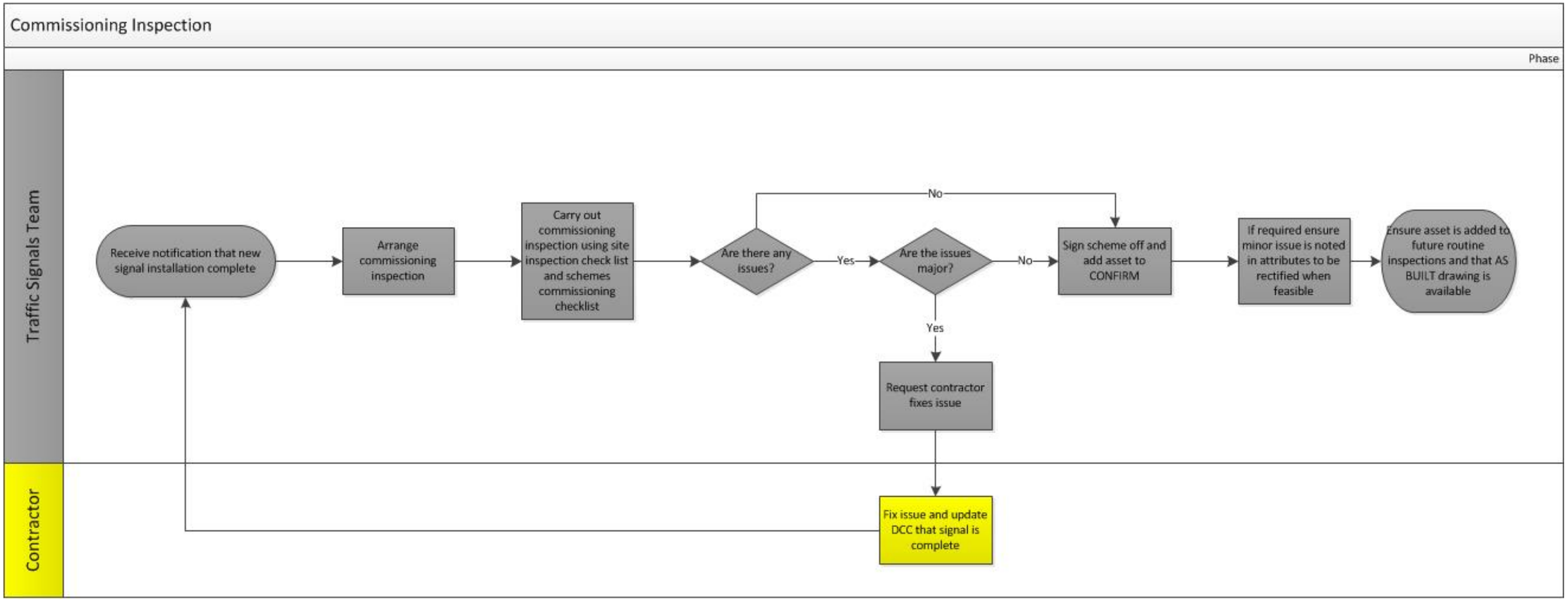
APPENDIX A: DEVELOPMENT AREA SUMMARY

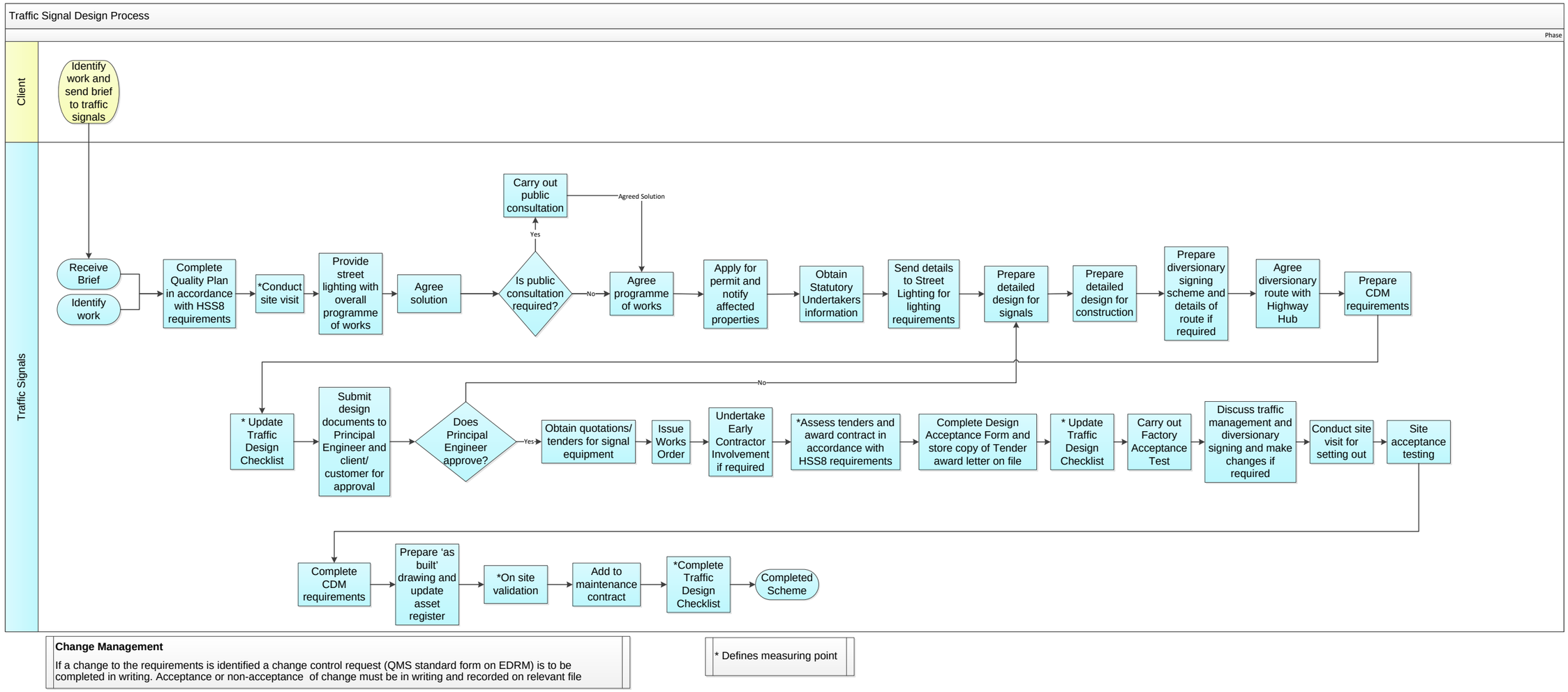
Table 10: Development Area Summary

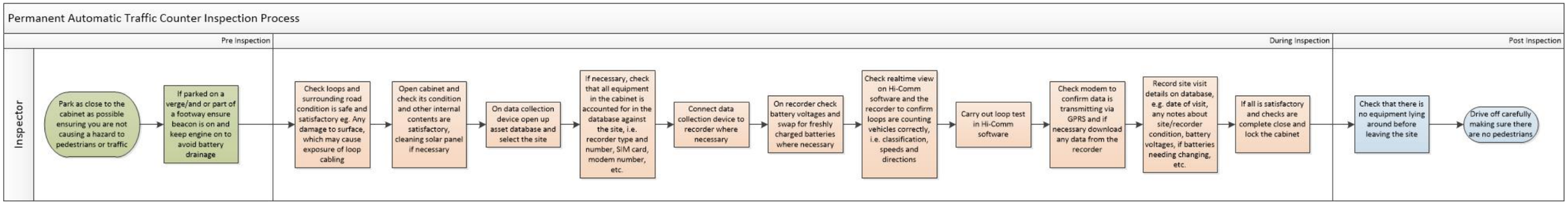
Development Area Number	Development Area Title	Action Taken
1	Full asset capture	
2	Zebra Crossing digitisation	
3	Speed camera digitisation	
4	Car parking metres introduction	
5	Rising bollards introduction	
6	DHHART (Derbyshire Highways Hub Real Time Information) Project:	
7	Permanent sites inspections using CONFIRM	
8	Increasing inspections	
9	Car park metre inspections	
10	One single asset management system	
11	Timings of inspections	
12	Electrical testing contract	
13	Remote monitoring	
14	Increasing signal timings assessments	
15	Upgrading FAWLS	
16	Replacement of car parking metres	
17	Upgrading traffic monitoring at weak bridges	
18	Cross asset considerations	
19	Amendments to traffic signals maintenance contract	
20	Development of Planned Works Process Maps	
21	Calculating the FAWLs backlog	
22	Completing the asset database and inspection assessments in CONFIRM	
23	Adopting a value management/engineering approach	
24	Adding all signals risk assessments to the entire RN	
25	New framework for signal equipment provision	
26	Procuring an external contract for traffic monitoring tubes	

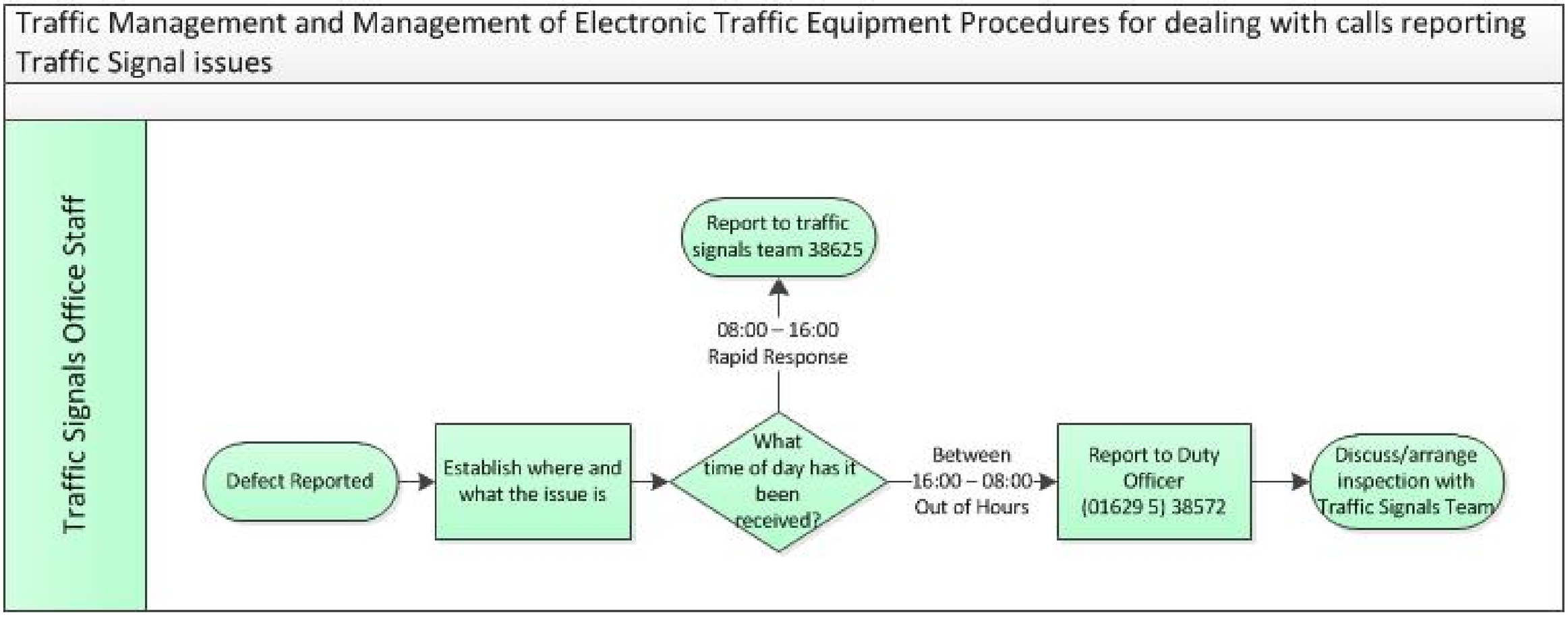
APPENDIX B: PROCESSES











APPENDIX C: COMMISIONING INSPECTION FORMS

Site Location:		**Site Reference:**	
Serial Number:		**Configuration No:**	
Street Furniture		**General**	
Correct heads/box signs	☐	Correct height PBs	☐
Correct Phase Locations	☐	Correct height heads	☐
Heads Aligned	☐	Sufficient Green Times	☐
All Lamps Lit	☐	Sufficient Intergreens	☐
MVD/IR alignment	☐	OMU phase/detector	☐
Correct loops/location	☐	Location documents	☐
LV push buttons	☐	Phone line number	☐
Tactiles/audible	☐	Electrical tests	☐
Correct Legends	☐	Solar Cell/Dimming	☐
All equipment secured			
- Head	☐		
- Push buttons	☐		
- Controller	☐		
Earthing – doors/push buttons	☐		
Lockable isolator in pillar controller	☐		
Red Lamp Monitoring	☐		
Green Conflicts	☐		
Wiring tidy	☐		
Correctly labelled wiring	☐		
Detectors labelled/working	☐		
Correct Detection wiring	☐		
Correct IOP positions	☐		
Base Sealed	☐		
Log Book/Spec/Drawing	☐		
SA/SD working	☐		

Signed: **Authority:**
Position: **Date:**

Site Acceptance Checks (Traffic Signals Equipment)					
Site:	Date:	Engineer:	Installer:	Controller:	Serial No:
Item	Check		✓ ✖	Comments	
	signal poles : grommets in unused holes				
	signal poles : cables glanding / earthing				
	signal poles : pole caps secure				
	signal poles : stub pole caps				
	signal heads : illumination of all lamps / box signs				
	signal heads : correct aspects				
	signal heads : damage to reflectors				
	signal heads : correct brackets / extension arms / clearance				
	signal heads : aligned / secure				
	signal heads : backing boards / white strips secure				
	signal heads : hoods (P&S) / louvers				
	signal heads : operation				
	push-button units : secure / correct angle				
	push-button units : correct 'WAIT' legends				
	push-button units : ELV / clearly labelled				
	push-button units : earth connections				
	push-button units : bleepers / volume				
	push-button units : tactile units secure / earthed				
	push-button units : tactile units rotate freely				
	signal controller : case secure				
	signal controller : main fuse / breaker rating				

	signal controller : spare cores earthing		
	signal controller : cables labelling / tidiness		
	signal controller : Time & Calendar, BST adv. / rtd., week		
	signal controller : base seal		
	signal controller : condensation		
	signal controller : DFM lamp / lens		
	signal controller : detector packs labelling		
	signal controller : paper-work		
	signal controller : keys		
	cabling : spare capacity		
	cabling : spare in controller / chambers		
	cabling : draw ropes		
	electricity supply : cut out rating		
	electricity supply : fuse rating		
	electricity supply : auxiliary isolator / breaker		
	street detection : position / shape / backfill		
	street detection : sensitivity		
	street detection : MVD alignment		
	operation : illumination of lamps as phase requirements		
	operation : detectors demand / extend / gap-out		
	operation : suitability of intergreens		
Item	Check	✓ ✖	Comments
	operation : hurry call		
	operation : red lamp monitoring		
	operation : remote link		
	OMU : configuration / operation		
	OMU: TRN lead		
	OMU MOVA: configuration / operation		
	OMU MOVA: detector inputs		
	documentation : signal company specification		
	documentation : take-over certificate		
	documentation : electrical test certificate		
	documentation : detector loop test certificate		
	documentation : cabling details		

APPENDIX D: HERS COMPETENCY REQUIREMENTS

The HERS competency requirements can be found here.

HIGHWAY INFRASTRUCTURE ASSET MANAGEMENT PLAN FOR STRUCTURES

JANUARY 2020

AN ELEMENT OF THE HIGHWAY INFRASTRUCTURE ASSET MANAGEMENT SYSTEM

Document Information

Title	Highway Infrastructure Asset Management Plan for Structures
Author:	Teri Ford/Bronwen Terry
Reviewed:	Julian Gould

Document Issue Status

TABLE OF AMENDMENTS					
NO	**APPROVAL DATE**	**SECTION**	**PARAGRAPH**	**DETAILS**	**AUTHOR**
1	xx/xx/20xx	All	All	First Issue	

Contents

1. INTRODUCTION

The Well Managed Highway Infrastructure states:

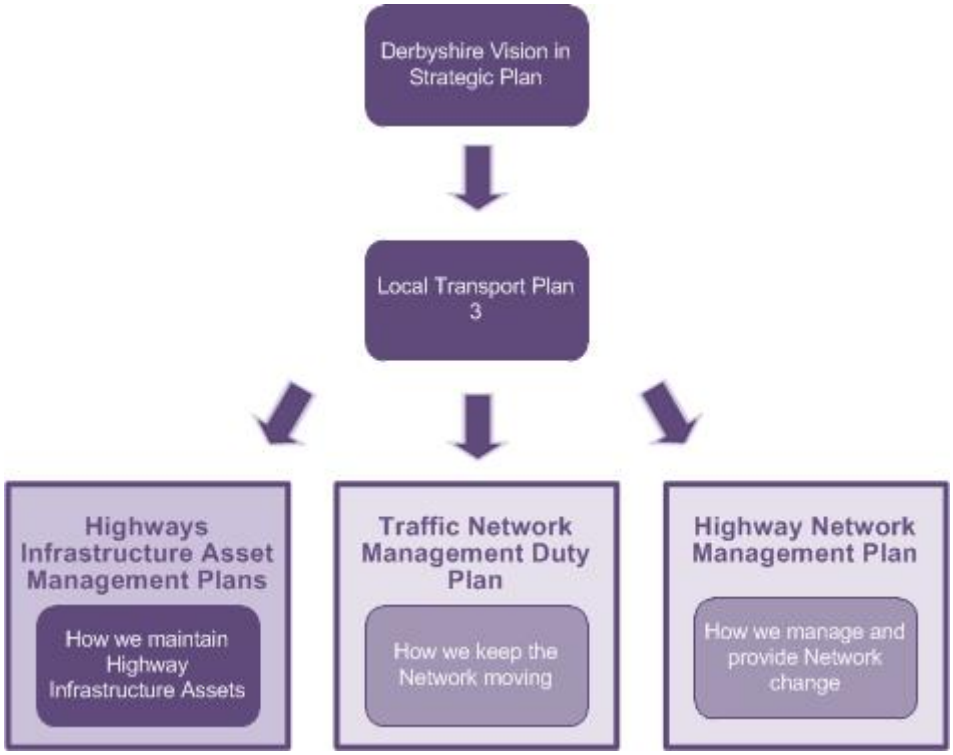
“it is not in the public interest to allow highway structures to deteriorate in a way that compromises the functionality of the highway network, be it through restrictions or closures caused by unsafe structures or the disruption of traffic through poor planning of maintenance work.” Failure of a structure is its inability to meet this function.

This document provides the technical details that supports the Highways Infrastructure Asset Management Strategy and Plan and forms part of the Highways Infrastructure Asset Management suite of documents. It is a working document that provides the processes and information used internally by staff undertaking roles in the delivery of service.

This document will recognise a number of Development Areas where Derbyshire has recognised potential improvements to the service they deliver. These development areas are aspirations only and will be reviewed on an annual basis to assess whether they are deliverable from a financial and resource perspective. A breakdown of these Development Areas can be found in Appendix A.

The following figure shows this document in context with other key documents in how the network is managed, maintained and changed:

Diagram 1: Plans and Policies Framework



2. SCOPE

This document covers the structures on the Derbyshire highway network that Derbyshire have a responsibility to maintain. These include bridges, retaining walls, highway walls, public rights of way footbridges, landslips, rock faces, gantries, subways/underpasses and bridge chords.

This document also includes the duty of care required by Derbyshire County Council to ensure that those bridges and structures that are maintained by third parties such as Network Rail, Highways England, the Environment Agency, Canal and River Trust, local land owners and businesses do not impact on the safety of the highway.

It should be noted that a number of the structures within the highway are either designated monuments/historic structures or are located within a conservation area or world heritage site. These statuses are an important part of the heritage of Derbyshire and it is vital that these assets and their locations are maintained in accordance with the associated guidance and relevant legislation. These are important factors that require specific consideration as part of the asset management process.

3. ASSET CAUSES OF DETERIORATION

The main causes of structures assets deterioration are itemised in the table below.

Table 1: Deterioration and Associated Defects

Type of Asset	Cause of Deterioration	Description	Typical Defects
Bridges Retaining Walls Culverts <0.9m in diameter Highway Walls (not a retaining wall but a Derbyshire owned boundary wall) Public Rights of Way Footbridges	Wear and tear/ageing	Action of vehicular traffic, weathering, corrosion and chemical reaction	Deterioration of structural components Beyond life expectancy
	Scour (flooding and/or blockage due to debris)	Abrasive action of water and debris	Partial collapse or destruction of structure Adjacent flooding effects of other assets, surrounding landscape
	Change in use from initial design	Excess/unsuitable traffic or excess water leading to other effects such as scour	Deterioration of structure and reduced life expectancy
	Climate change	Additional freeze/thaw events Flooding/scour Heat damage Change in water tables	Acceleration of deterioration effects
	Liquefaction/ saturated backfill	Over saturation of the material due to excess water (ie statutory undertaker failure)	Cause component failure, leading to structure failure
	Vehicle/accident impact	Vehicle collisions with structure	Can cause severe damage and leave them in an unsafe condition. Can result in temporary road closures and

			diversions until the necessary repairs can be made
	Vandalism	Graffiti and effects of fire etc	Deterioration of structural components and/or structural failure
Landslips	Scour (flooding and/or blockage due to debris)	Abrasive action of water and debris	Partial collapse or destruction of structure Adjacent flooding effects of other assets, surrounding landscape
	Climate change	Additional freeze/thaw events Flooding/scour Heat damage Change in water tables	Acceleration of deterioration effects
	Liquefaction/ saturated backfill	Over saturation of the material due to excess water (ie statutory undertaker failure)	Cause component failure, leading to structure failure
	Vehicle/accident impact	Vehicle collisions with structure	Can cause severe damage and leave them in an unsafe condition. Can result in temporary road closures and diversions until the necessary repairs can be made
	Vandalism	Graffiti and effects of fire etc	Deterioration of structural components and/or structural failure
Rock Faces Gantries	Wear and tear/ageing	Action of vehicular traffic, weathering, corrosion and chemical reaction	Deterioration of structural components Beyond life expectancy
	Climate change	Additional freeze/thaw events Flooding/scour Heat damage Change in water tables	Acceleration of deterioration effects
	Vehicle/accident impact	Vehicle collisions with structure	Can cause severe damage and leave them in an unsafe condition. Can result in temporary road closures and diversions until the necessary repairs can be made
	Vandalism	Graffiti and effects of fire etc	Deterioration of structural components and/or structural failure

DEVELOPMENT AREA 1: Historic and Conservation Factors

Update the Asset Management system to embed the following information for each structure:

- Historic Structures and Scheduled Monuments information for those assets within each specific curtilage
- World Heritage Site extents
- Conservation Area extents

Additionally there are numerous structures that are located at the boundaries between Derbyshire and its neighbouring authorities. Currently the boundary agreements that exist between Derbyshire and these authorities require consolidation and updating to reflect changes within the network. Discussions have been completed with Derby City which has resulted in an informal agreement.

DEVELOPMENT AREA 2: Boundary Agreements

Derbyshire County Council legal services are required to draft a new boundary agreement with Derby City. This agreement which is to include responsibility, ownership and levels of service for each structure is to form the model agreement for each of the remaining authorities. Discussions are to be undertaken with the remaining authorities.

Those structures with special engineering difficulties that can either affect NRSWA equipment or be affected by NRSWA equipment have been identified and the information is available within the asset management system and in Geoplace.

4. NATIONAL/LOCAL GUIDANCE AND RELATED DOCUMENTS

The maintenance of structures is governed by a series of national documents and guidance including:

- Well-managed Highway Infrastructure: A Code of Practice 2016
- Inspection Manual for Highway Structures Volume 1: Reference Manual (May 2007)
- Inspection Manual for Highway Structures Volume 2: Inspector's Handbook (May 2007)
- CSS Bridge Condition Indicators Vol2: Bridge Inspection Reporting (April 2002)
- Addendum to CSS Bridge Condition Indicators Vol2: Bridge Inspection Reporting (Aug 2004)
- DMRB Volume 3, Section 1, Part 4, BD63/17 Inspection of Highway Structures
- CIRIA Rock netting systems – design, installation and whole-life management (C775)

These documents are either available online (and links are provided from this document) or are stored locally by the section. It is the responsibility of all relevant staff to ensure that any guidance is the latest available.

This document is a live document that will be reviewed biannually or whenever a significant change is required to any of the processes or procedures documented within it.

In some circumstances national standards either do not exist or have had to be adapted to meet local requirements within the County.

DEVELOPMENT AREA 3: Local Standards

The following areas have been identified as requiring the development of local standards:

- Structures Design Guide for Development Control
- Retaining Walls
- Competency of Bridge Inspectors

Bridge Champion

The Head of Structures has the role of Bridge Champion within the Authority. The primary function of this role is to reduce the risk of bridge strikes within the County. Therefore this role co-ordinates all aspects of highways infrastructure assets that may affect the functionality of a bridge such as the traffic signage (including electronic signage) and lines relating to the bridge etc. It is responsible for the liaison with other relevant sections that may maintain these associated assets to ensure that the risk of the bridge being compromised is reduced. The role also ensures liaison is held with 3rd party asset owners, such as Network Rail.

DEVELOPMENT AREA 4: Bridge Champion

To append a plan in the Asset Management System detailing the location of the relevant additional assets such as traffic signing, lining etc that relate to the restrictions currently in place for a structure. There is a need to ensure inspection processes are followed with regard to checking the existing traffic signage is compliant.

5. LEVELS OF SERVICE AND CRITICAL ASSET IDENTIFICATION

The Highways Infrastructure Asset Management Policy, Strategy and Plan have developed and documented the overarching Levels of Service derived from the authority's statutory duties, the national and regional guidance, the management and mitigation of risk both to the service user and the authority and the volume and type of traffic using the network.

The Levels of Service that define the Council's approach to the management of the highway assets have been defined against the Network Hierarchy and the Resilient Network. These can be found online here. There are two levels of service in regards to safety on the network due to budgetary constraints. Levels of Service will be reviewed and amended regularly to take into account the budgetary position.

Critical Assets

Critical highway infrastructure is considered to be those assets where failure would result in significant impact to the local, and potentially the national economy. They have a high consequence of failure, but not necessarily a high likelihood of failure. The structures critical assets are currently defined as those located on the resilient network and will be detailed in Appendix B once Development Area 5 is complete.

DEVELOPMENT AREA 5: Critical Asset Definition

Work is required to refine the criteria to define the critical assets, as not each structure identified on the resilient network may have the same level of impact in terms of effect on the local economy.

The table below shows how the Levels of Service relate to the different network hierarchy levels.

Table 2: Bridges Specific Levels of Service

	Structures on Resilient Network and Critical Assets (19.9% of total structures)	**Structures on Network Hierarchies 1 - 7 (80.1% of total structures)**
	Level of Service 1	**Level of Service 2**
	Safety + Serviceability + Sustainability + Customer Service	**Provision of safety related issues and Customer Service only**
Objective	Comply with statutory obligations and to provide Network Safety and customer service RN to be prioritised to ensure availability and minimise costs where budgets allow	Comply with statutory obligations and to provide Network Safety and customer service
Standard	Comply with Code of Practice and apply asset management techniques to optimise whole life costs.	Comply with Code of Practice and apply asset management techniques to optimise whole life costs.
Impact/ Risks/ What it means	• Programme of inspections and determination of condition. • Lifecycle planning leading to 3-10 year forward programme with prioritised annual programming. • Routine maintenance and planned works including some investment in structural maintenance leading to improvements in condition, reduction in backlog and further reducing dependence on reactive maintenance. • Safety inspections and identified safety defects prioritised according to risk based approach. • Officer observation and all other non-safety repair requests added to the programme to be dealt with in accordance with the timescales set out in the HIAMP. • A BSCI crit and BSCI av intervention level of 70.	• Programme of inspections and determination of condition • Lifecycle planning leading to 3-10 year forward programme with prioritised annual programming. • Predominantly reactive maintenance • Minimal intervention to prevent asset deterioration • Safety inspections and identified safety defects prioritised according to risk based approach. • Likely increase in non-safety defects with potential for increase in third party insurance claims.

Table 3: Other Structures – Retaining Walls

	Structures on Resilient Network and Critical Assets 116.8KM walls	Structures on Network Hierarchies 1 - 7 Assets KM walls – See Development Area 7
	Level of Service 1	**Level of Service 2**
	Safety + Serviceability + Sustainability + Customer Service	**Provision of safety related issues and Customer Service only**
Objective	Comply with statutory obligations and to provide Network Safety and customer service RN to be prioritised to ensure availability and minimise costs where budgets allow	Comply with statutory obligations and to provide Network Safety and customer service
Standard	Comply with Code of Practice and apply asset management techniques to optimise whole life costs.	Comply with Code of Practice and apply asset management techniques to optimise whole life costs.
Impact/ Risks/ What it means	• New assets to be identified through a combination of desktop analysis and survey work. New asset data to be captured and asset condition to be assessed. • Inspection programme to be developed based on risk. • Maintenance to be initially reactive, but a programme of planned works to be developed based on risk. • A programme of improvement works to be undertaken only if funds can be obtained and identified. • Safety inspections and identified safety defects prioritised according to risk based approach.	• Programme of inspections and determination of condition • Lifecycle planning leading to 3-10 year forward programme with prioritised annual programming. • Predominantly reactive maintenance • Minimal intervention to prevent asset deterioration • Safety inspections and identified safety defects prioritised according to risk based approach. • Likely increase in non-safety defects with potential for increase in third party insurance claims.

6. IDENTIFICATION OF NEW ASSETS – DATA CAPTURE

The following table highlights the ongoing process with regard to identifying new assets:

Table 4: Processes to Identify New Assets

Structure Type	Level of Service 1 Resilient Network	Level of Service 2 Network Hierarchies
Bridges	On a reactive basis only	
Culverts <0.9m in diameter	Provided in the HIAM Part 2 for Drainage	
Retaining Walls	See Development Area 7	
Rock Faces	On a reactive basis only	
Landslips	On a reactive basis only	
Highway Walls (not a retaining wall but a Derbyshire owned boundary wall)	On a reactive basis only	
Public Rights of Way Footbridges	Public Rights of Way Footbridges (PROWs) are currently being digitised by Countryside and are being added to the Asset Management System when issues are identified	
Gantries	All have been recorded	
Bridge chords	On a reactive basis only	

All data is to be recorded and stored within the Asset Management System in accordance with the Data Management Strategy and Quality Management System, shown in Appendix C. Any new assets will be risk assessed and put into a programme of re-inspection if required.

DEVELOPMENT AREA 6: Updating the QMS Process Maps

The Quality Management System processes require an update and will be added to Appendix C.

7. INVENTORY UPDATE AND ASSET CAPTURE

DEVELOPMENT AREA 7: Retaining Walls Asset Capture

The development of a programme to capture the remaining retaining walls derived from a risk based matrix which prioritises localised areas based on previous enquiries/defects that have been raised, clusters of scheme locations and local knowledge. Initially this is to commence in Matlock Bath to test the system. It is anticipated that the locations will be primarily in the north-west of the county in the High Peak and sections of the Derbyshire Dales.

DEVELOPMENT AREA 8: Rock Faces Inventory Update

A desktop exercise is required to examine the existing sites already identified and review the information currently held to align with Ciria C775 guidance.

8. AS-BUILTS PROCESS AND DATA CAPTURE

Development Control Process

Where new assets are provided through the development control/planning process, the as-builts are to be provided by the developer and sent to each asset owner, who is responsible for entering them onto AMX as detailed in the Quality Management System. If the number of assets is small in number then this task is to be completed by the asset owner, however if the number of assets to be added is likely to be significant then this data capture process will be completed by the Highway Strategy team using the driven asset capture survey. See Appendix C for the detailed process. It is the asset owner's decision as to which process is to be adopted, if it is the latter process, then development control will include this item in the brief for the developer to contribute to the cost.

DEVELOPMENT AREA 9: Development Control Process

The Development Control process needs to ensure that developer schemes (S278 and S38) should produce an as built drawing which is checked by the Clerk of Works in construction and then sent to the asset owner for them to input. This task will be carried out by 1 person to complete all assets at the same time which is funded by developer control budget. Discussion with Development Control needs to occur to establish if fees need to be increased to cover this additional cost and to ensure the as built output meets the requirements of CONFIRM.

Internal Capital Schemes

Where new assets are provided by the internal design and construction services, the design brief is to include the production of an as-built/photograph of each new asset to the asset owner as detailed in the Quality Management System. If the number of new assets is small in number then the necessary update to the asset management system is to be completed by the asset owner, however if the number of new assets to be added to the database is likely to be significant then this data capture process will be completed by the Highway Strategy team using the driven asset capture survey. See Appendix C for the detailed process. It is the asset owner's decision as to which process is to be adopted. However, if it is to be the latter process, then a percentage of the overall scheme cost is to be allocated to the capital scheme to complete this task.

DEVELOPMENT AREA 10: Update Inventory – Internal Capital Schemes

This process needs developing and implementing.

Internal Revenue Schemes

Where ad-hoc new assets are provided by the asset owners' design team and internal construction services, it is the responsibility of the construction service team or the design team to provide the asset owner with an as built drawing and photo of the completed work so that the asset owner can update the asset database accordingly.

DEVELOPMENT AREA 11: Update Inventory – Internal Revenue Schemes

This process needs developing and implementing.

9. INSPECTIONS AND SURVEYS

Highway structures are routinely inspected to ensure they remain safe for public use. The inspections also provide the data required to support good asset management practice. Paragraph C5.2.2 Inspection within the 2016 Well-managed Highway Infrastructure states it should be sufficient to:

- Identify condition, defects and signs of deterioration that are significant to highway structure safety and management
- Identify any significant changes in condition, loading or environment that have occurred since the last observation
- Assess or provide information for the assessment of stability and serviceability
- Determine or assist the determination of the cause, extent and rate of deterioration
- Provide information that can be used to support highway structures management, ie the identification of needs and associated maintenance works

Structural inspections with the County are conducted by either of the two methods below:

- visually by the inspector with evidence gathered using photographs
- remotely using video cameras/or static camera attached to a drone

The procedures to complete an inspection of highway structures by these methods and to input the resultant data are found in Appendix C.

DEVELOPMENT AREA 12: Improvement to the AMX/CONFIRM Connection

The CONFIRM team needs to work with structures to see if the USRN can be stored in AMX making the process quicker. Discussion also needs to be had with the CONFIRM provider to look at automating the process.

The following documents are to be referenced and followed when undertaking any site work and are accessible on DNET or on the drive.

- DCC Emergency Information Handbook (Version 2.0)
- DCC document GCP11: Structures
- DCC document General Risk Assessment: Structures Site Visits
- DCC document General Risk Assessment: Use of Hand Tools for access to structures and retaining walls
- DCC document General Risk Assessment: Structures Drone Flying Procedure
- DCC Structures Lone Working Procedure 17 Dec 2018 v0

Consent will be sought from the appropriate regulatory body before work commences where it involves a listed structure.

When considering Derbyshire structures the council will consider assets as singular items that incorporate numerous elements together.

Routine Surveillance

This is undertaken via highway infrastructure asset safety inspections which are undertaken by Highway Inspectors and are designed to identify, assess, record and prioritise the repair

of identified safety defects which may present an immediate danger or significant inconvenience to users of the highway. The information detailing the processes involved in completing safety inspections and the risk based approach to safety defect assessment and repair are detailed in the Highway Infrastructure Asset Safety Inspections Manual.

Any queries raised are forwarded through the Confirm system to the structures department for action.

Initial Asset Identification Inspection – Data Capture

At the point where a new structure of any structure type has been identified an initial inspection will be undertaken. The information gathered will depend on the structure type held within the asset management system.

As part of this inspection process a risk assessment will be undertaken to establish the appropriate interval time for re-inspection.

Superficial Visual Inspection

This type of inspection applies to those structures for which a public right of way exists across it but are not maintained by Derbyshire County Council and are the responsibility of a third party. There are two elements to this inspection outlined below:

- those where the owner is deemed responsible such as Network Rail or Highways England – these structures are subjected to an inspection regime by the relevant authority and limited access is available by Derbyshire County Council to these structures due to the restrictions in place in accessing their network. Therefore the visual inspection is restricted to those structural elements that can be seen from the Derbyshire County Council network and their effect on the highway carriageway or footway surface
- those were the responsibility of the owner is unknown – at these locations permission to examine the structure can be obtained from the owner and it is possible for a visual inspection of the structure

The methodology for this type of inspection is shown in Appendix C.

Enquiry/Adhoc Inspection

As a result of a highway safety inspection requesting additional investigation into the underlying cause of a safety defect or due to a customer enquiry, an adhoc inspection may be undertaken of any structure type. The process can be found in Appendix C.

General Inspection

A general inspection applies to a bridge structure only and has been risk assessed to be undertaken every two years. This is a visual inspection of the bridge structure. The general inspection process flow is shown in Appendix C.

Principal Inspection

A principal inspection applies to a bridge structure only and requires a close examination, ie within touching distance of all inspectable parts of the structure using access scaffolds, ladders or hoists. It determines the condition of all parts of the structure, the extent of any significant change or deterioration since the last Principal Inspection and any information

relevant to the stability of the structure. The principal inspection process flow is shown in Appendix C.

Enhanced General Inspection

DEVELOPMENT AREA 13: Enhanced General Inspection

The enhanced general inspection process needs to be developed or a decision needs to be made to create this new process or just carry out Principal and General Inspections. If the new process is developed it will be added to Appendix C.

Special Inspection

These can occur for a number of different reasons on a reactive basis:

- pre or post a significant event such as flooding, abnormally heavy loads or bridge strike
- as part of the handover/acceptance process from development control
- when a particular problem is detected during an earlier inspection
- on structures that have loading or other forms of restrictions on use ie look at specific elements
- where a post tensioned bridge has a regime of Special Inspections implemented as a result of an earlier investigation

DEVELOPMENT AREA 14: Flooding

A desk top exercise is required to define the criteria for when/where/what levels of flooding have to occur to trigger this special inspection. Additionally the high risk structures that could be affected need to be identified.

DEVELOPMENT AREA 15: Abnormal Loads

Links need to be established between Network Planning and Structures in order for height or weight restrictions to be available for appropriate routing of abnormal loads.

DEVELOPMENT AREA 16: Post Tensioned Special Inspections

These are currently not completed and have a high priority to implement.

All condition data should be recorded and stored within the AMX computer program. An overview of this asset data is stored in the single asset management system in order to provide relevant access to all required users. Data is controlled in accordance with the Data Management Strategy.

10. ASSET CONDITION AND ASSESSMENT

Condition – Bridges

The County Council monitor the condition of all bridge structures for which it is responsible. All bridge inspections are carried out to a nationally agreed format which allows the calculation of Bridge Condition Indicators (BCIs). A Bridge Condition Index is determined for each individual bridge, based on its condition at the time of the inspection. The BCI system is a nationally developed method, with two BCI values calculated for each bridge:

- BSCI crit – the value when only the critical load-carrying elements are considered

- BSCI av – the value when every element of the bridge is considered

As a guide the BSCI values represent the following:

Table 5: National Guidance for Asset Conditions

Condition Categories	Description
Excellent (BSCI 90-100)	No functional or structural defects
Good (BSCI 80-89)	Some minor defects that have limited impact on the structure
Fair (BSCI 65-79)	Minor to moderate defects that may impact on the durability of the structure and may impact on function
Poor (BSCI 40-64)	Moderate to major defects that are likely to impact on the function of the structure
Very Poor (BSCI 0-39)	Major structure defects and some components on the bridge may be failed, requires attention

The above is based on national standards and Derbyshire has agreed to take action when bridges hits a BSCI of 70.

Condition – Other Structures

The County Council monitor the condition of the structures identified including retaining walls, landslips and rock faces. However there are no nationally agreed condition indicators for these other structures, and a locally based relevant system is required.

DEVELOPMENT AREA 17: Condition – Retaining Walls

A locally devised methodology is required to define the condition and its categories for retaining walls with an associated scoring system. For many retaining walls there is no structural design due to the age of the structure. Therefore the condition will be based on a visual inspection only and an assessment of a number of risk factors. These include height, proportion that is considered retaining, proximity to the carriageway/footway etc. The overall risk factor will establish the condition of the structure and priority into any future works programme.

Landslip condition is currently undertaken through a combination of drone footage, visual examination and recording of changes over time through photographs.

DEVELOPMENT AREA 18: Condition – Landslips

One location has been allocated capital funding to allow remote monitoring through ground sensors. This project requires completion and assessment to see if there is

merit by reducing the timescale in providing remedial action in it being provided at other locations.

DEVELOPMENT AREA 19: Condition – Rock Faces

Following on from Development Area 8 Rock faces Inventory Update the condition of the structure will be developed through analysing an overall risk factor to the neighbouring highway.

No condition data is collected for gantries, highway walls and bridge chords.

Assessment of Structures – Bridges

The bridge stock is managed for structural capacity through structural assessments every 12 years and monitoring of abnormal loads. There are bridges that are classed as sub-standard in their loading capacity and these are managed through a monitoring regime and, where appropriate, with weight restrictions. It should be noted that a number of these bridges are historical monuments and therefore it is not possible or desirable to strengthen them. However, where this does not apply it is intended to reduce the number of bridges defined as sub-standard through a strengthening programme where funding allows.

DEVELOPMENT AREA 20: Assessment of Structures Programme

A prioritised programme based on risk has been developed to redress the backlog currently experienced in the number of assessment of structures required. This requires implementation, funding and resourcing.

11. LIFECYCLE PLANNING

All condition data is stored within AMX for Bridges and Structures solution. This computer system enables the management of all structures types and provides lifecycle. However currently lifecycle planning is only provided for bridges and gantries using the CIPFA approved structures toolkit. Lifecycle planning is provided for 30 years allowing a timeline to be produced for when works/interventions will be required. There is no national provision to provide lifecycle planning for retaining walls, rock faces and landslips, these would have to be provided at a local level and would have limited use.

This program also allows the DfT valuation calculations to be undertaken along with the Gross Replacement Costs and Depreciated Replacement Costs. It also produces and reports both national and local performance data.

12. MAINTENANCE PROCESSES AND DESIGN

There are three types of maintenance works undertaken on those structures maintained by Derbyshire County Council:

(a) **Reactive maintenance**, covers the identification and repair requirements of safety defects generally resulting from vehicle impacts on structures. Vehicle collisions can severely damage highway structures and leave them in an unsafe condition. In the worst cases this results in temporary road closures and diversions until the necessary repairs can be made. Reports can be received from third party sources such as police, members of the public, other council departments and the call centre. Repairs are actioned on a priority basis dependant on the severity of the damage and location on the network.

(b) **Routine or cyclic maintenance** is a do-minimum response, reacting to concerns from inspections to ensure that a structure is fit for purpose and safe to use. This type of maintenance does not improve the general condition of the structure to any large degree but is considered as maintaining the structure in a steady state. AMX is used to prioritise the maintenance works identified by the routine inspections and from this an annual programme of maintenance work is drawn up. Typical minor works include:

- Painting of parapets
- Vegetation removal
- Parapet and barrier repair
- Graffiti removal
- Minor masonry repairs and re-pointing
- Minor concrete repairs
- Mechanical and electrical – servicing, cleansing and repair

(c) **Planned or programmed works**, this follows more detailed inspections, which look at all aspects of the structure and the maintenance history, schemes are developed to improve the longevity and overall condition of structures. Dependant on the importance of the structure to the network, works could include the strengthening or replacement of complete structures that have reached the end of their serviceable life. Typical works include the following:

- Replacement
- Strengthening
- Refurbishment
- Masonry repairs and re-pointing
- Concrete repairs
- Parapet replacement
- Bearing replacement
- Waterproofing or re-waterproofing
- Safety barrier/railing replacement

Programmes of preventative maintenance are undertaken on component parts of structures that have a finite life eg bridge expansion joints, bearing, paint systems. If undertaken in a timely manner they extend the working life of a structure.

DEVELOPMENT AREA 21: Development of Planned Works Process Maps

Planned works process maps are currently under review and need to be developed in the future.

The design processes will be shown in Appendix C. once Development Area 6 is completed. These include the consideration of the following:

- The protection of protected species, e.g. bats and otters in the maintenance of bridges and structures.
- Any statutory undertakers equipment within or near the structure
- Any relevant local standards, policies relating to heritage and consistency with character, carbon reduction, environmental impact, nature conservation and biodiversity

For those structures requiring remedial works and not maintained by Derbyshire County Council, liaison and cooperation with the structure owner is the preferred methodology to rectify any identified issue with the structure. This should initially be to make the structure safe, by either signing/guarding or applying to close the highway but also to determine the remedial works required. The structure owner should be given an appropriate length of time to react and organise the required works, however this should be in proportion to the risk to the users of the structure and its location on the hierarchy. If no response is forthcoming from the structure owner, then Section 56 and 59 of the Highways Act 1980 should be used to complete the works using the enforcement process outlined in Appendix C.

13. BACKLOG

DEVELOPMENT AREA 22: Creation of the Back Log Record

A short term aspiration of Derbyshire is to create useful records of the structures back log

This is the outstanding backlog and is a database of all work that is currently outstanding on the network. It includes the following:

- Planned/programmed works
- Routine/cyclic maintenance
- reactive maintenance – although it is recognised that these cannot be planned in detail in advance but should still include a volume of work for these, albeit on unknown structures, based on past experience and engineering judgement

The table below show the amount required by year to support required investment in bridges across the Resilient Network

Table 6: Amount required over the next 6 years for Resilient Network bridge investment

Year	Amount required to support investment on RN for bridges
2019 (Year 1)	£18.83m
Year 2	£0.429m
Year 3	£1.342m
Year 4	£1.473m
Year 5	£1.661m
Year 6	£1.858m

For bridges on the rest of the network approximately £102m would be required.

DEVELOPMENT AREA 23: Retaining Wall Backlog

The estimated value for all retaining walls is approximately £2billion. Further work needs to be completed to calculate the backlog financial amount.

DEVELOPMENT AREA 24: Lifecycle Planning

Develop lifecycle planning for the network hierarchy.

14. VALUE MANAGEMENT/ENGINEERING APPROACH

DEVELOPMENT AREA 25: Adopting a Value Management/engineering Approach

The structures section already use a value management approach whereby we take into account the benefits of undertaking maintenance and the risks of not undertaking maintenance which then provides a prioritised list for Value Engineering to ensure we choose the optimal solution to ensure maintenance need is met while reducing waste and inefficiencies. However, for non-bridge structures Derbyshire would aspire to improve related documentation.

15. CROSS ASSET CONSIDERATION

When considering financial requirements Derbyshire will consider allocating budget to those assets that require more financial input regardless of where the money was originally allocated.

16. FORWARD PROGRAMME

The 1 to 5 year forward programme of work for bridges is available in Appendix D.

The prioritisation of the schemes identified within the forward programme will be determined annually by available budget, condition and risk.

DEVELOPMENT AREA 26: Forward Programme – Other Structures

The forward programme needs to be extended to include retaining walls and footbridges.

17. ANNUAL PROGRAMME

This is formed from the first year of the forward programme depending on the capital allocation available. This can be found in Appendix D.

18. RISK REGISTER

A risk can be defined as an uncertain event which influences the desired performance of an asset. A risk factor is the produce of the severity of an event and the likelihood of its occurrence. Derbyshire County Council has a well-established risk management process that overarches all service areas and also a highway specific one.

The risk management process concentrates on four main issues, by applying these risk management principles, the council will be able to more appropriately target resources and to deliver services and projects in a way that ensures the council's overall exposure to risk is minimised.

The risk register overleaf identifies risks and appropriate mitigation measures.

Table 7: Risk Register

Risk Level	Identify Risks	Evaluate Risk	Manage Risk
Strategic	Understanding the asset	The absence of asset information compromises the ability to provide lifecycle planning and consider budgetary allocations	Derbyshire have a good understanding of its structures asset stock. The asset inventory is complete for the resilient network. However, further data is required to fully understand Derbyshire's retaining wall asset information. See Development Area 7.
	Budget Concerns	The absence of relevant finances will mean asset condition will deteriorate and as such resilience of structures infrastructure could be compromised	Budget management and apply for additional funding where feasible Lifecycle planning Budget Management
	Changes to Traffic	Changes to traffic patterns and the usage of road may lead to changes in budget prioritisation for assets	Pre-empt network changes or travel patterns at the design and planning stages
	Climate Change	Climate change can increase deterioration causes, affecting the lifecycle of some assets and their components meaning intervention will be required sooner than expected	Lifecycle planning/inspections to encompass climate predictions

19. COMPETENCY AND TRAINING

Derbyshire County Council has an internal competency specification for all bridge inspectors which is an HNC qualification in civil engineering, 5 years' experience is required to allow an inspector to inspect alone. Each inspector is required to annually undertake 5 continuous professional development training days and be audited by their peers.

All inspection procedures, toolbox talks and risk assessments are reviewed, updated and then trained on an annual basis. The departmental code of practice is reviewed on a five yearly basis.

All external contractors undertaking condition inspections are required to meet the same minimum Derbyshire specifications. A Principal Bridge Inspection is undertaken jointly between the external contractor and Derbyshire to audit, benchmark and ensure consistency between each organisation.

All competency and training requirements are summarised within the skills matrix in Appendix K once Development Area 25 is completed and managed through the Derbyshire County Council MyPlan system.

The skills matrix will link to the competency framework for asset management.

DEVELOPMENT AREA 27: Creation of a skills matrix

A skills matrix across the Highways department is required. See Appendix E. There is also a desire to investigate the possibility of creating an inspection competency framework in conjunction with MSIG or ADEPT.

20. PERFORMANCE MANAGEMENT FRAMEWORK

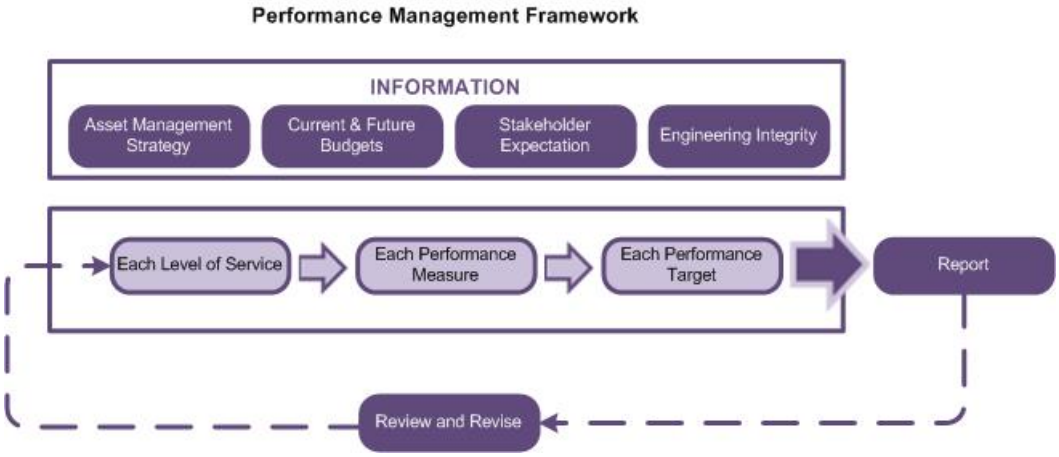
The Performance Framework is used as a tool to inform, measure, review and drive the management and decision-making processes associated with implementing corporate changes and day-to-day decisions relating to the delivery of services, linked to the network hierarchy. The figure below shows the performance management framework.

It is not intended that the Council creates a host of measurements that serve little purpose other than to demonstrate the presence of a framework. At any level, external-facing performance measures should show how well services are being delivered and whether objectives are being achieved.

Internally, a range of input and output measures may be used for monitoring purposes but the key indicators should reflect performance in key service areas to inform senior managers as well as corporate and stakeholders of the service as a whole.

The Performance Management Framework diagram is shown below

Diagram 2: Performance Management Framework



The table overleaf shows the performance measures and targets for structures.

Table 8: Performance Indicators

Level of Service	Performance Measure	Level of Service 1 Resilient Network	Level of Service 2 Network Hierarchies 1 - 7
		Target	Target
Safety	% of 32 hour defects repaired in target time	90%	
	% of 9 day defects repaired within target time	90%	
	% of 28 day defects repaired within target time	80%	
	BSCIav (Bridge Structural Condition Indicator Average)	>65	>50
	BSCIcrit (Bridge Structure Condition Indicator Critical Element)	>65	>50
	% of general inspections completed with tolerance levels	100%	
	% of principal inspections completed with tolerance levels	100%	
	Number of bridges with a BSCIav below intervention level	0	
	Number of bridges with a BSCIcrit below intervention level	0	
Serviceability	Number of structures restricted due to works being required	0	
Sustainability	Backlog	Part of Development Area 23.	
	% as-builts provided	100%	
	% asset inventory updated	100%	
Customer Service	NHT % of residents satisfied with highway maintenance KBI 24	54%	
	NHT % of residents satisfied with the condition of the highway KBI 23	39%	
	NHT % of residents satisfied with condition of road surfaces HMBI 01	40%	
	NHT % of residents satisfied with the speed of repair to damaged roads and pavements HMBI 07	32%	
	NHT % of residents satisfied with the quality of repair to damaged roads/pavements HMBI 08	40%	

21. COMMUNICATIONS

All information relating to communication is contained with the Highways Communication Plan.

22. CLIMATE CHANGE ADAPTION AND CIVIL EMERGENCIES AND SEVERE WEATHER EMERGENCIES PLANS

All plans relating to this area of work are included on the Derbyshire Prepared website and in the 3 Counties Alliance Partnership (3CAP) document.

The corporate climate change manifesto can be found here.

23. HERITAGE AND CONSISTENCY WITH CHARACTER

Generic information that will relate to all assets and crosses all HIAM Part 2 documents and therefore are included in the Highway Network Management Plan.

24. CARBON REDUCTION

Generic information that will relate to all assets and crosses all HIAM Part 2 documents and therefore are included in the corporate Carbon Reduction Policy.

25. ENVIRONMENTAL IMPACT, NATURE CONSERVATION AND BIODIVERSITY

Generic information that will relate to all assets and crosses all HIAM Part 2 documents and therefore are included in the Highway Network Management Plan.

26. SUPPLY CHAIN COLLABORATION AND COLLABORATION IN SERVICE DELIVERY

DEVELOPMENT AREA 28: Creation of new procurement and supply chain processes

Structures do not currently have of their own frameworks. Consideration needs to be given to creating new frameworks for walling, painting and repairing, steel works and geotechnical works.

27. DELIVERY

Delivery is primarily completed through the Derbyshire County Council Construction Services. The construction process is currently under review.

28. PROCUREMENT

See Development Area 28.

29. OPERATIONAL POLICIES

Operational Policies are covered in the Highway Network Management Plan

30. APPENDICES

APPENDIX A DEVELOPMENT AREA BREAKDOWN

Table 9: Development Areas Breakdown

Development Area Number	Development Area Title	Action Taken
1	Including historic data in asset information	
2	Formalise boundary agreements	
3	Develop certain local standards	
4	Bridge Champion	
5	Define critical assets	
6	Updating the QMS Processes	
7	Retaining Wall asset capture	
8	Rock faces inventory update	
9	Creation of development control processes	
10	Update Inventory – Internal Capital Schemes	
11	Update Inventory – Internal Revenue Schemes	
12	Improvements to the AMX/CONFIRM connection	
13	Enhanced General Inspection	
14	Desktop exercise to define flooding criteria	
15	Creation of links between network planning and structures to support abnormal load planning	
16	Post tensioned special inspections	
17	Methodology to define condition of retaining walls	
18	Landslip condition testing	
19	Rock faces condition testing	
20	Creation of a prioritised programme for assessment	
21	Development of Planned Work Process Maps	
22	Development of work bank	
23	Retaining Wall Backlog	
24	Lifecycle Plan for Network Hierarchy	
25	Adopting a value management/engineering approach	
26	Extending forward programme to other structures	
27	Creation of a skills matrix and collaboration with ADEPT and MSIG for inspector competency framework	
28	Creation of new procurement and supply chain processes	

APPENDIX B: PLAN OF CRITICAL ASSETS

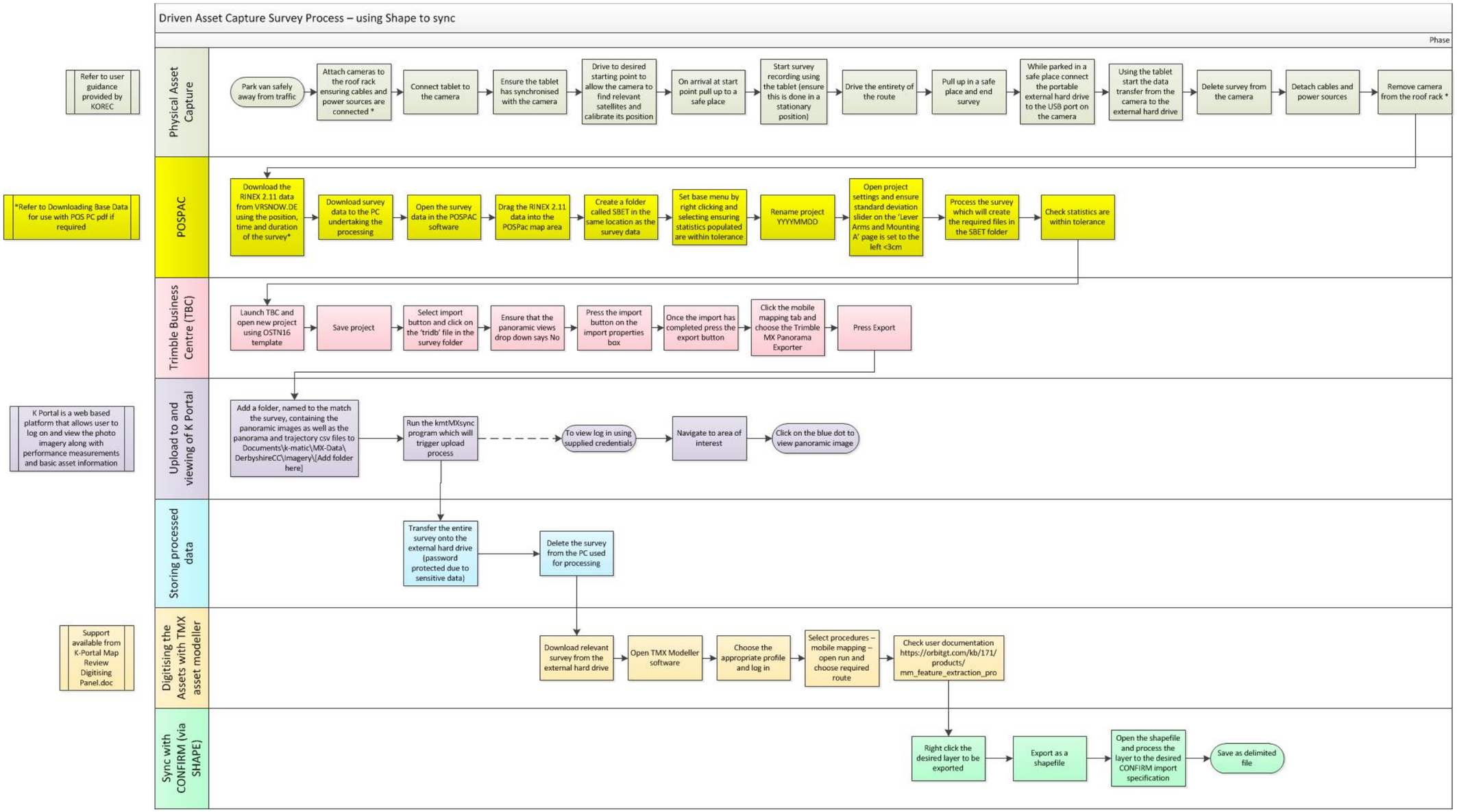
This will be added once Development Area 5 is completed.

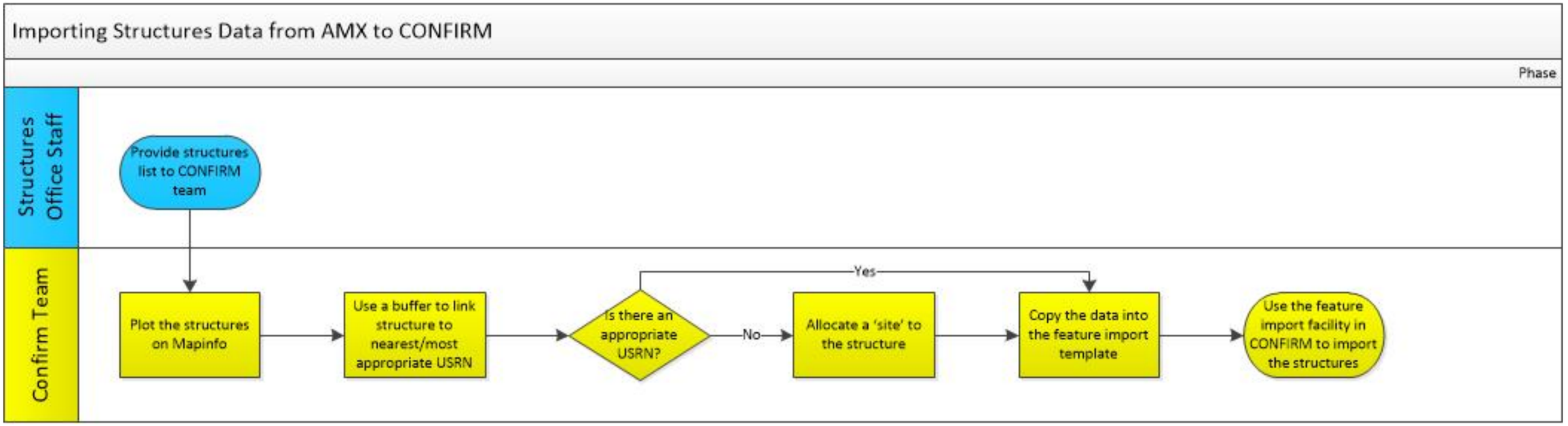
APPENDIX C: PROCESS MAPS

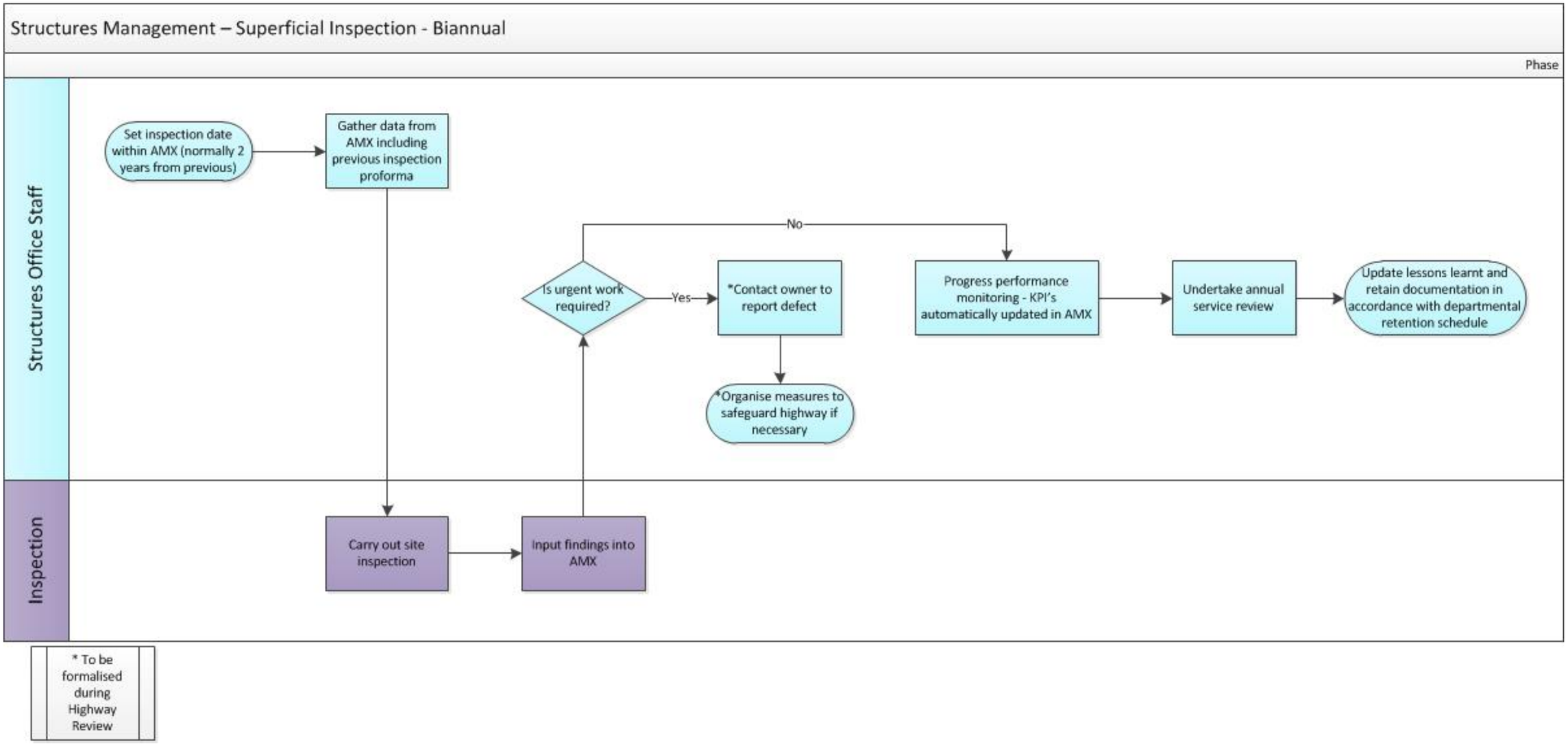
Quality Management Process Maps will be added once Development Area 6 is completed.

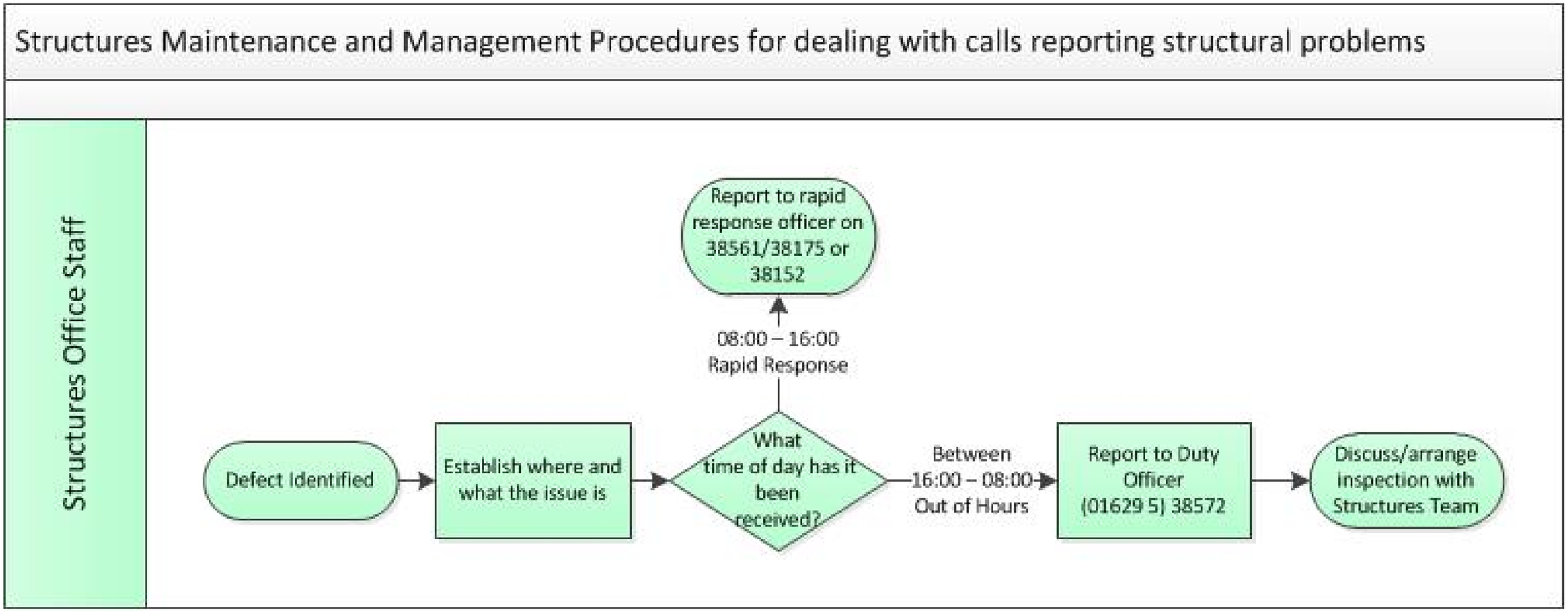
The procedure for inspection of highway structures including entering data on to AMX is stored locally and can be found here.

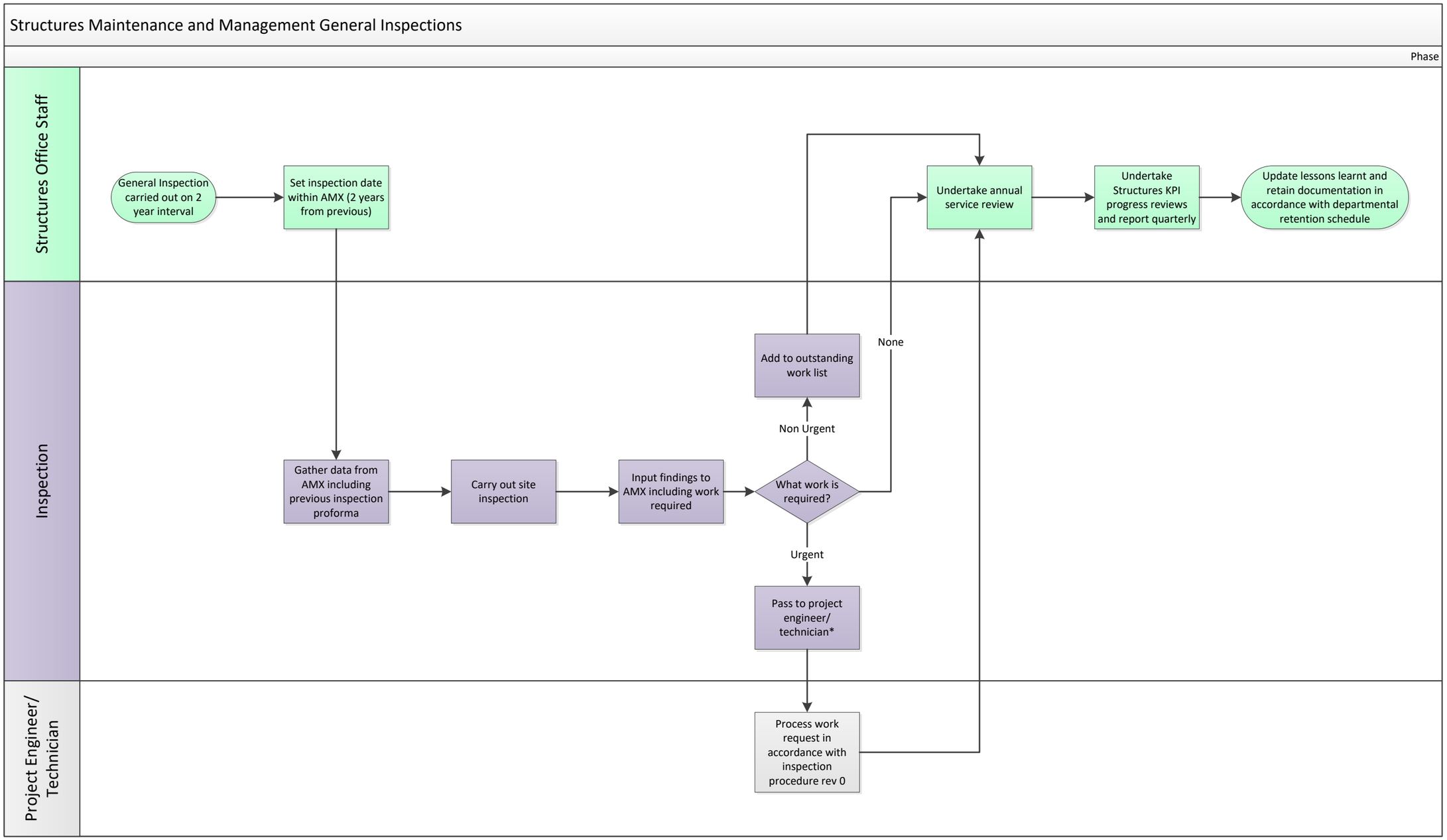
The procedure for inspecting by drone is stored locally and can be found here.

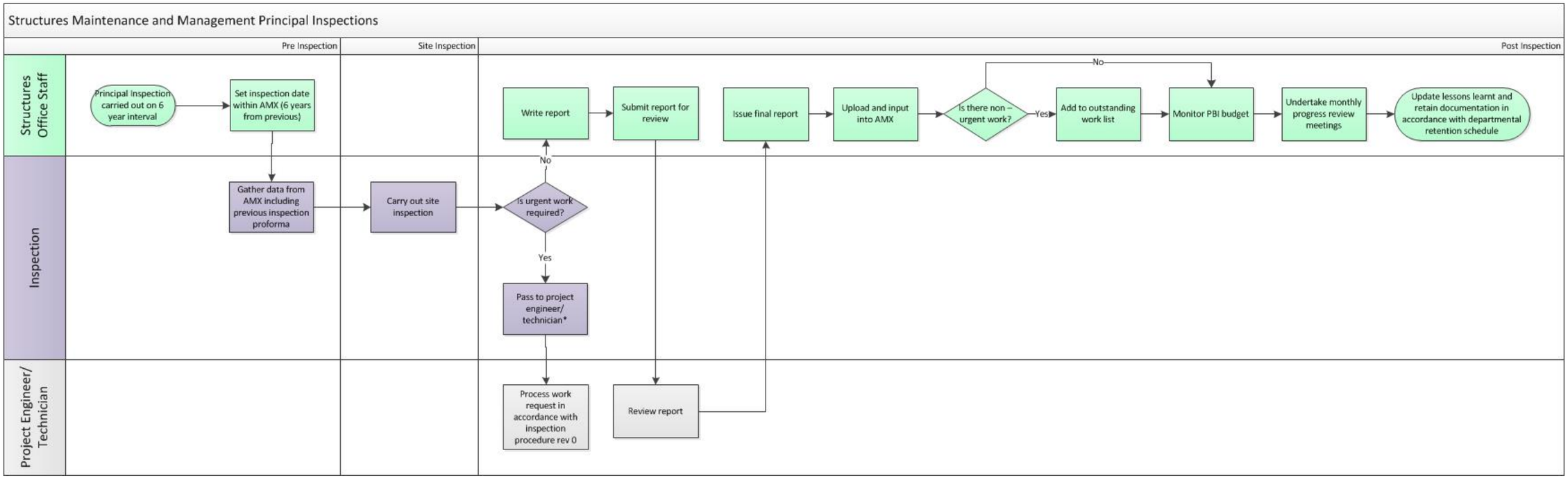




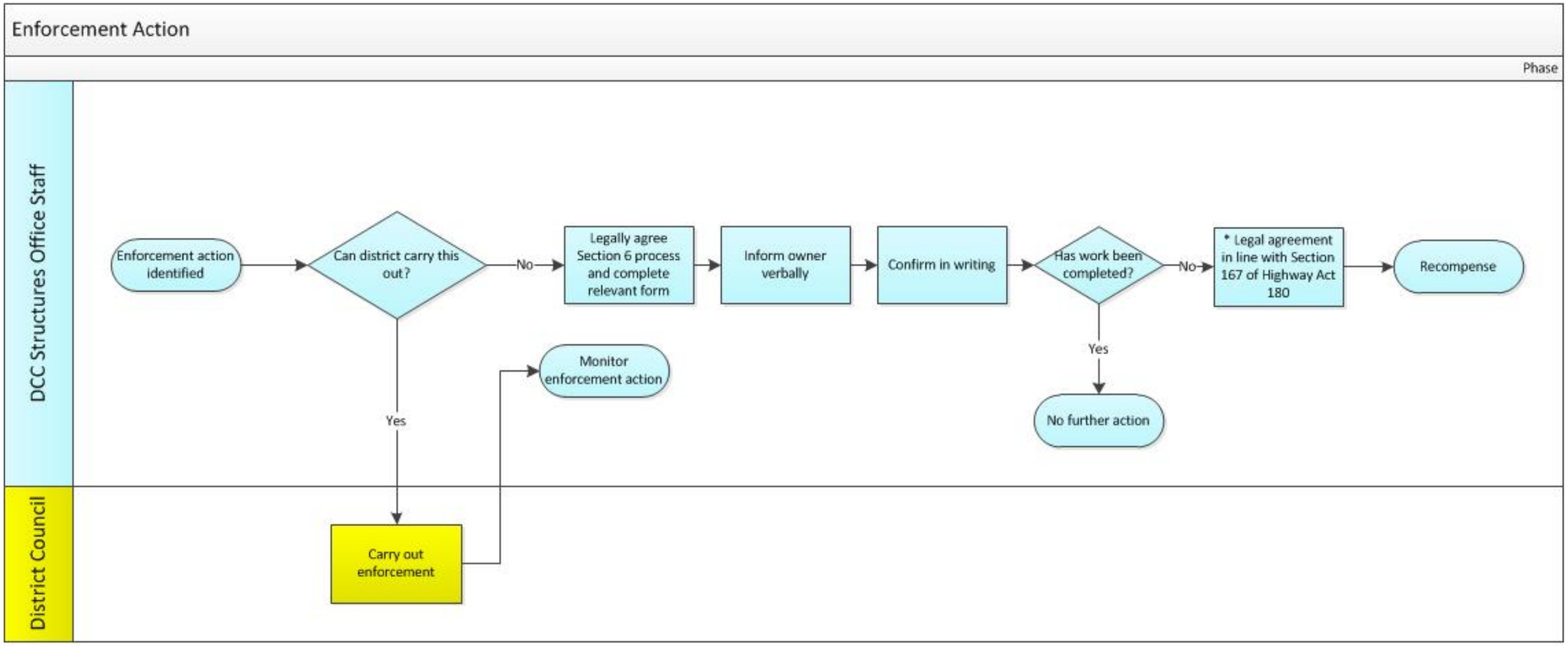








Enhanced General Inspection Process will be added dependent on the outcome of Development Area 11.



APPENDIX D: 1 TO 5 YEAR FORWARD PROGRAMME

The forward programme can be found on our website here.

APPENDIX E: SKILLS MATRIX

This will be added once Development Area 27 is completed.

TRAFFIC NETWORK MANAGEMENT DUTY PLAN

JANUARY 2020

Document Information

Title	Traffic Network Management Duty Plan
Author:	Paul Beckett/Bronwen Terry
Reviewed:	Geoff Pickford

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TABLE OF AMENDMENTS					
NO	**APPROVAL DATE**	**SECTION**	**PARAGRAPH**	**DETAILS**	**AUTHOR**
1	/01/2020	All	All	First Issue	

CONTENTS

INTRODUCTION

The intention of this Traffic Network Management Duty Plan (TNMDP) is to set the criteria by which we manage the operation of the network (i.e. keeping the traffic moving).

This plan does not cover trunk roads or motorways, which are the responsibility of the Highways England, or roads within the city of Derby which are either the responsibility of Derby City Council or Highways England.

It is intended that this TNMDP is reviewed bi-annually in a format that enables regular updates to be issued in a controlled way. This will enable the TNMDP to respond to changes in standards and legislation and the continual improvement in technology, techniques and procedures.

THE OBJECTIVES OF THE TRAFFIC NETWORK MANAGEMENT DUTY PLAN

A number of factors can affect how available and efficient the network functions, these include:

- Network management and co-ordination;
- Activities within the highway including road closures and lane closures resulting from highway maintenance works, new developments and the work of statutory undertakers, etc.;
- Routing of different classes of vehicles;
- Network Restrictions and enforcement;
- Management of conflicts between different highway users.

Key Aims

The key aim of the TNMDP is to deliver against the Government's priorities for transport: "tackling congestion and disruption on the Highway network enabling the expeditious movement of traffic, delivering accessibility; offering improved transport choices and reliable journey times; better air quality and improved alternative transport."

The Plan is both a long-term plan and a commitment to improve the management of road works and the expeditious movement of traffic. The County Council aims to build on and improve its existing services along with implementing new actions to improve the reliability of journey times across Derbyshire and into adjoining local authority networks.

As a key output from the TNMDP, the County Council will ensure that the effective and efficient use of the current Highway network provides improved traffic flow and reduced congestion for residents, businesses and visitors. Any measure taken on the network to improve network reliability or resilience should not be at the expense of our other responsibilities or duties as a Highway Authority.

NATIONAL LEGISLATION AND GUIDANCE

In managing the Highway network, the County Council has many powers and duties relating to this function. The relevant legislation is included in the 'County Council Applicable Legislation Register'.

In addition, the scheme of delegation for powers and duties are contained in Appendix TA02 of the Highway Network Management Plan – Highway Network Scheme of Delegation &

Duties 2019 which contains more detail of relevant Acts and sections. This is reproduced in **TA02.**

The areas of legislation that specifically relate to the TNMDP are as follows:

HIGHWAYS ACT 1980

The 1980 Act covers the management and operation of the highway in England and Wales. It includes the protection, lawful and unlawful interference of highways, provision of special facilities, closure, street bylaws, acquisition, vesting and transfer of land.

TRAFFIC MANAGEMENT ACT 2004 (TMA)

The TMA places a duty on the Authority to consider all works affecting the highway with particular reference to congestion, disruption and delays to journeys.

NEW ROADS AND STREET WORKS ACT 1991 (NRSWA)

Non highway authority works within the highway are controlled by the NRSWA. Section 59 of NRSWA states that a street authority shall use their best endeavours to co-ordinate the execution of all kinds of works in the street including works for road purposes and street works. This Act allows for streets to be designated under different categories, which determine the relevant procedures and notice periods to be adopted when statutory undertakers etc. intend to carry out street works for example Traffic Sensitive Streets.

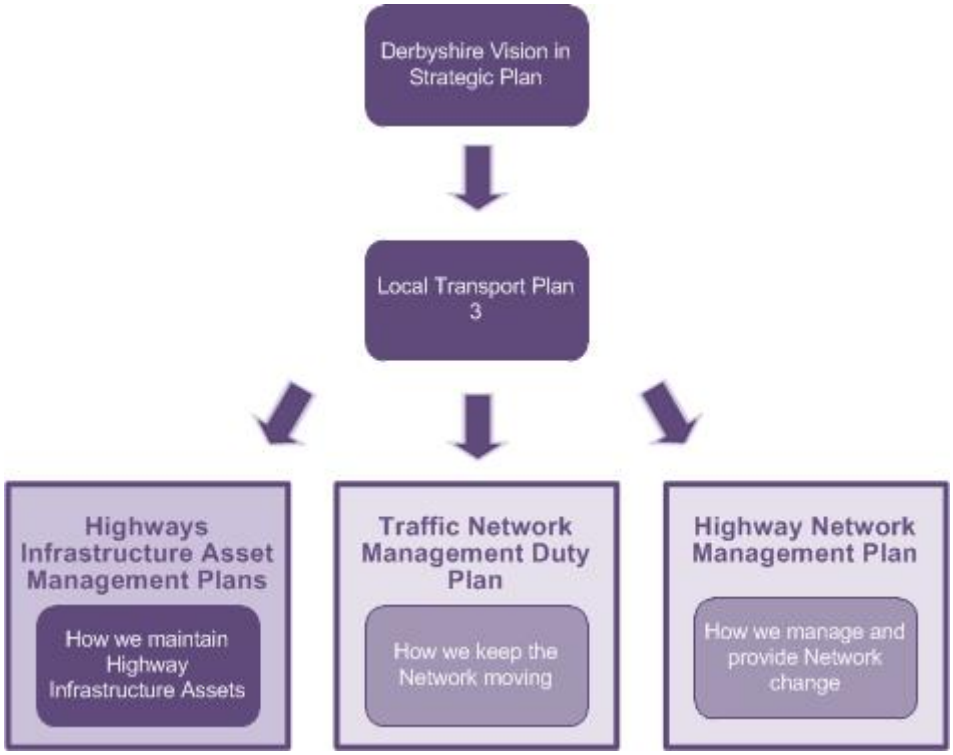
ROAD TRAFFIC REGULATION ACT 1984 (RTA)

The RTA provides powers to the relevant authority to regulate or restrict traffic on the highway. There are ten parts to the Act, which covers road closures, traffic restrictions, crossing, parking provision, traffic signs, speed limits, bollards and control and enforcement.

PLANS AND POLICIES

The following figure shows its context with other key documents in how the network is managed, maintained and changed:

Diagram 1: Plans and Policies Framework



INVESTING IN INFRASTRUCTURE & PROVISION OF SERVICES

National Picture: Road Classification

There are various classifications of roads in Derbyshire:

Motorways and Trunk roads (also referred to as the Strategic Road Network or SRN): these are managed on behalf of the Department for Transport (DfT) by Highways England.

The following are maintained by the County Council as Highway Authority:

Primary Route Network: these link major population centres in the County with other major population centres in neighbouring counties and the national road network. These are all A class roads and are usually shown as green on most maps.

County Principal Routes: these are the remaining A class roads which, together with the Primary Route Network, make up the inter-urban road network in the County. These are usually shown as red on most maps.

To compliment the above, the Government has also included 11 of Derbyshire's A class roads in the Major Road Network (MRN). These are routes that are accepted as having

regional and national importance in providing transport links, enabling housing and business development to promote economic growth.

B Roads: These are roads intended to connect different areas and feed traffic between A class roads and smaller roads on the network.

C Roads: Smaller roads intended to connect together unclassified roads with A and B roads.

Unclassified – These are local roads intended for local traffic. The majority of roads in the county fall into this category.

Local Picture: Network Hierarchy and Resilient Network

A local network hierarchy including a resilient network has been developed based on traffic usage and is detailed within the Network Hierarchy Plan and the Resilient Network documents within TA05.

Traffic Sensitive Streets

Traffic Sensitive Streets are streets for which the Highway Authority requires more advance notice of works and also where extra attempts should be made by those carrying out works to minimise delays to road users.

The traffic sensitive street network strikes a balance between the needs of road users and the requirements to maintain the Highway fabric and also the statutory undertakers' networks. The Authority has taken a very responsive attitude towards traffic sensitive streets for its own Highway maintenance works and attempts to carry out works outside traffic sensitive periods.

Abnormal Loads

Abnormal loads will be routed as far as possible on strategic routes. The choice of route will be made to minimise inconvenience to other Highway users and to avoid damage to the Highway structure and street furniture.

An abnormal load is one that is greater than 44 tonnes overall weight, 10 tonnes single non-driving axle weight or 11.5 tonnes driving, wider than 2.9m or exceeds 18.65m in length. For vehicles or loads that exceed any of these dimensions, hauliers must give us two clear days' notice.

Loads over 150 tonnes, 6.1 metres wide or 27.4 metres long require Special Orders from the Department of Transport.

Most notifications are submitted through ESDAL or similar electronic notification system.

Congestion

Guidelines contained within the TMA advise that measures to control congestion only become a statutory requirement in urban areas exceeding more than 250,000 residents.

Derbyshire consists of much smaller population centres, however the Council recognises that the effects of traffic delays and the associated disruption to transport is of vital importance to its citizens and should be addressed wherever possible.

At peak period times the county road network suffers delays at some locations. In the main during the working week these are confined to urban areas although delay does extend to high demand areas such as the network around M1 junction although largely rural based.

However, at weekends the situation can be reversed in rural tourist areas with delays around a number of tourist 'hot spots'.

Surveys show that the periods of greatest delays are in the morning between 8am and 9am and around tea-time from 4pm to 6pm. The Authority is seeking to reduce the effects of the school run through its Sustainable Modes of Travel to School Strategy. This includes promoting the DfT's Modeshift Sustainable Travel Accreditation and Recognition for School (STARS) scheme, alongside encouraging active, healthy and sustainable forms of transport such as walking and cycling. This also contributes towards reducing the harmful impact of sedentary lifestyles and the air pollution associated with motor vehicles

The majority of roadworks can cause some degree of delay to road users but with disproportional effects being felt on the major classified road network.

Futures Development

The future aims and objectives of the Authority within the context of the TMA 2004 are to seek to provide the opportunity for safe, sustainable and reliable journeys for both the public and businesses alike.

The Authority aims to report any disruption to a journey, whether planned or unplanned, to the public as quickly as possible. Information will be passed to the public giving advice on the likely duration of the disruption along with possible alternatives.

The Authority also acknowledges that whilst it would wish to reduce car journeys the practical socio-economic factors, coupled with topography and extensive rural areas, will limit what can be accomplished. However, the authority will encourage walking and cycling and non-car based trips to schools. Wherever practically possible the use of integrated public transport will be supported with attempts being made to enable a single ticket covering a user for various modes of public transport.

Work will continue to develop the road network in such a way as to facilitate its use by cyclists, pedestrians and public transport as well as the car user.

The authority will continue in its efforts to manage down the use of heavy goods vehicles with encouragement being given for the traffic, whenever possible, being transferred to the rail network.

As the authority does not envisage a major road building programme at the current time, it will continue to develop traffic management measures to offer safer, less disruptive journeys but giving priority to public transport users, pedestrians and cyclists.

To support economic growth and prosperity and assist in the management of the road network in Derbyshire, the County Council will continue to explore grant opportunities and will submit challenge funding bids as appropriate to access additional funding streams to ensure a safe and reliable network

Incident Management

Unfortunately incidents can happen on the Highway network at any time which can cause delays. Many incidents arise as consequence of road traffic collisions. In many of these incidents the Police will find it necessary to close, or at least restrict, the road to any traffic whilst the incident is dealt with. At times the Authority may be required to carry out emergency road works to repair a damaged road to make it safe for re-opening.

However, a more major or wide ranging incident, such as extensive flooding, may require the enabling of the Local Authority Emergency Plan which is overseen by the county's Emergency Planning Officer. These are plans which have identified potential risk situations and what mitigation may be required. Such plans involve accessing a range of skilled and experienced professional staff who are able to evaluate situations and provide emergency control centres, support and liaise with other organisations. Details of the plans can be found here and the Adverse Weather Implementation Plan also sets out how Derbyshire will react to severe weather events. This is availably internally.

In particular, the Authority works in close co-operation with the Highways England and its agents to mitigate the effects resulting from incidents on the local Motorway Network. Special arrangements are in place, which ensure diversionary routes can be signed quickly and effectively when required.

Management of Emergencies

The Highway Authority is not an emergency service, although managerial or technical assistance and equipment may be provided in the event of an emergency.

The Emergency Planning Division prepares emergency plans and makes arrangements to protect people and the environment or reduces the impact of an emergency in both the Derby City and Derbyshire County Council administrative areas.

The Division liaises on a regular basis with the emergency services, health services and other local authorities and partners in preparing its emergency plans. Joint training and rehearsals take place with these services and other agencies to ensure that these plans are effective.

Emergency road closures and diversions

Where roads have to be closed as a result of an emergency or adverse weather, diversionary routes will be established as soon as possible taking the needs of both through traffic and local communities into account.

The Authority in co-operation with the Police, will also attempt to provide information via local radio and social media on such incidents.

Diversion Routes

In the case of any closure on the Highway network, all road users need to be aware of the closure and subsequently the most efficient and suitable alternative route to continue their journey.

Work with Highways England has resulted in the agreement for diversionary routes from the national Motorway and Trunk Road network. For the authority's own road network local knowledge is used to identify the most appropriate alternative routes.

Where delays are expected to be caused by events, incidents or works on the Highway, diversion routes will be clearly signed to prevent unnecessary disruption and delay to traffic.

Further guidance relating to diversion signing is outlined later in this document.

24 hr a Day Service

The County Council operates a 24 hour a day 365 days a year Highways service to deal with weather and other emergencies. The service outside of normal working hours is delivered through the combined efforts of staff in Network Planning, Construction Services and supported by the Highways Hub.

Alternative text to be consistent with the reactive teams manual: The teams operate a 24/7 service during the working week however between 1600 hours and 0800 hours the following day there is a reduced level of resources available. However on a Friday this reduced level of resource starts at 1530.

Customer Service and Customer Engagement

The County Council is committed to providing a comprehensive customer service and has established the following with that objective:

- The County Council's Contact Centre, offers a point of contact for access to Council services filtering enquiries by the most appropriate method;
- Well-developed and maintained website providing both information and a suite of forms and guidance notes related to the Highway network and associated services;
- Provision of an automated response system to notify customers when Highway defects have been repaired.

The Highways Communication Plan outlines the way that we engage and inform stakeholders prior to, during and also after maintenance and delivery of infrastructure works either on or affecting the Highway network and other Highway assets managed and provided by the department. The Plan sets out guidance on how and when we should be providing information about our activities and enables a consistent approach to stakeholder engagement. The Highways Communication Plan can be found on the Derbyshire website

HIGHWAY OPERATIONS

Network Management is just one element of a Local Authority's transport activities and compliments other policies and actions.

The DfT issued the Network Management Duty Guidance in January 2005 to help authorities to manage their responsibilities under the TMA 2004.

The guidance from DfT provides a framework for the duties and powers that have been bestowed upon a Highway Authority in order that they may work toward the expeditious movement of traffic on their roads. For further information regarding the Network Management Duty go to www.dft.gov.uk. All works on the Highway will be carried out as quickly as possible, wherever practical and economical, to reduce inconvenience, delay and danger to users of both carriageways and footways.

Traffic Manager

Forming part of the Network Management duty, the TMA requires that all Local Transport Authorities appoint a Traffic Manager. The authority will exercise all of those functions that have an impact on traffic flows in a co-ordinated way with the precise duties and responsibilities of the Act forming part of the remit of the Traffic Manager. This role has an overview of policy, Highway works, public transport, service redesign and Highways information services.

Responsibility for Highways

The Highways service includes:

- Provision of network improvement schemes;
- Asset management and maintenance;
- Traffic management and third party access to the network;
- Road safety;
- 24 hour emergency response and network availability;
- Liaison with Development Control.

Working with Other Organisations on the Highway Network

The County Council actively encourages collaborative working ensuring effective co-ordination of public services. By maintaining on-going relationships with a wide range of stakeholders and other authorities it is able to share good practice and service improvements.

TRAFFIC POLICY

The County Council generally follows national policy, standards and guidance issued by the DfT and other national bodies.

Local policies are developed as and when required through the process of investigation by officers.

Current issues being considered are as follows:

Control of heavy goods vehicles (HGV) and operator licensing

The control of HGV movements is considered in the context of the network hierarchies.

Heavy goods vehicles should be encouraged, by road signs, to remain on the highest available category of route for as much of their journey as possible. Primary Routes are recognised as the national advisory route network for use by commercial vehicles between the Motorways and towns and includes all Trunk Roads and some County Principal Roads.

Under the functional road user hierarchy, they should be directed to use Strategic Routes and Main Distributor Roads. Access to the remaining network should be controlled to reduce the environmental and safety impact of HGVs through mandatory and advisory signing to identify preferred routes and height and weight limits. DCC will be liaising with satellite navigation companies and other bodies to ensure modern information systems reflect these preferred routes and height and weight limits.

As Highway Authority, the County Council has road safety responsibilities and under 'environmental provisions' within the HGV operator-licensing system may be a statutory objector in the case of unsuitable applications.

Environmental Weight Restrictions

In addition amenity weight restrictions will be considered where:

- A significant reduction of 50% of lorry movements can be achieved;
- Significant reductions in damage to the road fabric may be achieved;
- A restricted area can be defined which does not transfer the problem from one community to another;
- An alternative route exists for diverted lorries which does not pass through environmentally sensitive areas, create a major increase in route mileage for lorry operators, avoids dangerous junctions or other unsuitable sites and will not result in increased Highway maintenance costs;
- A scheme can be defined that can be clearly signed, easily understood by drivers, and is largely self-enforcing.

Amenity weight restrictions will include exceptions for access for the purpose of loading and unloading goods and garaging.

Exceptions may be allowed for specific local facilities.

Access only orders

Access Only orders will no longer be introduced for the purpose of preventing parking in residential areas following feedback from Derbyshire Constabulary. Other means to deter or prevent will be considered, such traffic calming measures.

However, Access Only orders may be considered in exceptional circumstances to prevent through traffic ("rat running") where:

- An appropriate acceptable alternative route exists which can be easily signed and understood and is largely self-enforcing;
- The problem is not merely transferred elsewhere.

An order will only be introduced with the support of Derbyshire Constabulary, who are the enforcement body.

Signs Policy

Traffic signs are provided to inform road users with regard to traffic restrictions, traffic regulations, the existence of potential hazards, road works and the direction to important destinations. This information can be in the form of signs on posts and road markings and can be permanent signs or temporary signs erected only for the duration of road works or special events.

The signs used on the Highway are regulated by national legislation and guidance issued by the DfT. Currently this is controlled by the Traffic Signs Regulations and General Directions (TSRGD) 2016. In addition the County Council document "Highway Signs – Environmental Code of Practice" to minimise the intrusion caused by road signage. See TA03.

DCC review of signs Highway Asset Review and Reduction Programme is ongoing, this is a systematic approach to assessing if assets are still appropriate and required or whether they should be decommissioned.

Permanent Signs

All signs will be provided in accordance with DfT standards, policies and advice. The County Council follows national standards and guidance in managing signs on the Highway network.

Tourist attraction signs

In accordance with the County Council's policy on Tourist Signs, these will be provided for bona-fide tourist attractions. Such signs will be provided at the cost of the applicant and they will only be provided for the longer term attractions.

Tourist signs will only be permitted to use the symbols as defined in regulations along with appropriate wording. The layout of signs and their location will be strictly managed to ensure that all road users are directed clearly and efficiently to the tourist attraction.

If the Authority believes that further brown signs may become a distraction to drivers on a particular route then it will limit any further expansion.

A visitor attraction is defined by the English Tourist Board to allow public access. It must be open to the public, without prior booking, for published periods each year, and should be capable of attracting day visitors and tourists, as well as local residents.

Tourism signs are traffic signs. Their purpose is to help those wishing to visit a tourist attraction to find it, using appropriate routes. Signs are not intended to advertise, they should be limited to providing information which drivers need. Undue proliferation of signs would be detrimental to road safety and harmful to the visual environment.

It is important that visitors to the County can find attractions and facilities using a system that is becoming known nationally.

In general, signs will only be provided from the point at which the visitor departs from the nearest strategic route or main distributor road. Signs will only be provided from trunk roads or Motorways where there is no nearer 'A' road and this is at the discretion of Highways England rather than the County Council.

Special cases could include attractions with large numbers of visitors, or where the location of the attraction is not clear from normal town/ village signing:

- Routes to attractions will, wherever possible, avoid increasing traffic in rural areas;
- Attraction operators that qualify for white on brown signs will be required to:
    - Remove all illegal private signing;
    - Agree not to erect further supplementary signing;
    - Agree not to use AA/ RAC seasonal signs in addition to the white on brown signs.

Scenic leisure drives and cycle routes will not be signed.

Attractions in neighbouring Highway Authority areas will be signed if they qualify under Derbyshire criteria and providing that the adjoining Highway Authority signs Derbyshire attractions to a similar or greater extent.

A cross-flow of tourists between Highway authorities is seen to be of general benefit but a reciprocal agreement with other Highway authorities is essential to ensure that Derbyshire is not disadvantaged.

The cost of maintenance and replacement will be commuted into the original capital cost, with the County Council then assuming full maintenance responsibility. In the event of major damage or theft the operator will be liable to replace the signs.

In exceptional cases the County Council may consider funding tourists' signs. These cases would include the additional cost of signs chosen deliberately to route traffic for network management or Highway safety reasons alone.

Within an urban area the use of white on brown signs, vehicle and pedestrian, will be encouraged for eligible attractions. These signs will direct traffic to the attraction if it has adequate car parking provision, or the nearest public car park where the attraction does not provide car parking. Pedestrian signing will then direct the visitor to the attraction.

Timescales

All applications will be processed and signs erected or refused within 6 months of the original application. Whilst many applications will be processed significantly quicker, 6 months will allow all necessary consultations with other agencies or councils to be completed.

Costs

The applicant will pay the cost of the sign and its siting and be responsible for all future maintenance costs including repair or replacement of damaged signs caused by vandalism or theft. Payment will be required in advance of any work being undertaken but after approval has been given.

Temporary signs

Temporary signs can include those required to warn road users of a hazard such as a slippery roads surface, no road markings or loose chippings or to enable the efficient and effective movement of traffic during road or street works, incident control or occasional events on the Highway. Temporary signs may be erected either by the Council or with the consent of the County Council. All signs erected for temporary purposes should be removed as soon as is reasonably practicable to avoid giving misleading information to drivers and to reduce street clutter.

Slippery Road signs

Slippery road signs will be erected when the skid resistance of a road is below the level stated in the Skid Resistance Policy. Existing slippery road signs will be reviewed annually following that year's Sideways Force Coefficient Routine Inspection Machine (SCRIM) Survey to determine whether the sign is still needed. Any signs no longer required will be removed in line with the asset reduction strategy.

Event signing

An important aspect of managing road signs is the use of temporary signs for special events. The County Council's permission is required to erect signs in the public Highway and sufficient time should be allowed (at least 3 months) to enable proposals to be checked

traffic orders to be raised and to enable co-ordination with other activities planned on the network.

Signs for special events may be permitted on a case by case basis to provide clear route directions to road users where it is recognised that traffic may be subject to delay or disruption or to direct vehicular traffic to car parking facilities. These signs will be erected prior to the event and removed as soon as is practically possible following the termination of the event.

The County Council will not consider attachments to street furniture apart from steel street lighting columns. Approvals are subject to consideration of the following:

- Suitability of the event (it is not intended to include retail openings or other promotions);
- Suitable height clearances (minimum 5.20m above the carriageway and 2.4m above the footway);
- Suitability of fixings (signs no greater than 0.3 square metres to be placed on street lighting columns);
- Suitability of location;
- Proposed sign locations must not cause an obstruction of the Highway or any hazard to Highway users;
- Planning permission may be required;
- Possession of at least £5 million third party public liability insurance.

Special event signing is commonly provided by motoring organisations such as the AA or RAC. Proposed signing should be agreed via the Highways Hub, including legends to be used and sign locations.

Diversion Route Signing

In the case of any closure on the Highway network, the travelling public need to be aware of the safest, most efficient and suitable diversion route that can be taken to continue their journey.

The County Council, as part of its Network Management Duty are committed to the provision of established diversion routes. These routes are operated for the vast majority of A roads in the County. The County Council will monitor and review the diversion routes to ensure their continued suitability.

An important aspect of managing road signs is the use of temporary signs for road works. The County Council's permission is required to erect signs in the public Highway and sufficient time should be allowed (at least 3 months) to enable proposals to be checked traffic orders to be raised and to enable co-ordination with other activities planned on the network.

Diversion routes will be clearly signed where delays are expected to be caused by works on the Highway to prevent unnecessary disruption and congestion to traffic.

Diversionary routes will be signed where delays may be expected caused by works on the Highway or other events (e.g. sporting). Only complete routes will be signed. They will be removed as soon as possible when they are no longer required.

Temporary signs for occasional functions may be erected subject to the following conditions:

- The organisers shall meet all the costs in providing, erecting and removing signs, indemnifying the County Council against any claim which may be made due to the erection of such signs on the Highway. Also they must ensure that:
    - County Council property is not damaged in any way;
    - The signs are erected shortly before the date of the function and removed as soon as possible thereafter;
    - Signs are only permitted where traffic problems might occur;
    - Temporary signs are only to be provided where existing direction signs are inadequate;
    - Signs shall comply with the Traffic Signs and General Directions 2016 and shall be erected by an approved contractor holding a minimum £5 million public liability insurance cover;
    - All routes/ schedules are supplied to the County Council for approval.

Work with Highways England has resulted in the agreement for diversionary routes from the national Motorway and Trunk Road network. For the County Council's own road network local knowledge has been used to identify alternative routes for the main road network. However due to the diversity and complexity of the local network a practical diversionary route may need to be considered from scratch.

Directional advertisement signs to significant developments within the Highway

The extent of signing provided to new housing developments, within the Highway, will be agreed with the Highway Authority. It will comply with the signing shown in the Traffic Signs Manual.

The developer will be responsible for the cost of the signs, their maintenance and replacement if necessary, and their eventual removal. The signs must be erected as soon as work starts on site and must be removed 3 months after the development is complete.

For guidance on directional advertisements not placed within the Highway refer to the Ministry of Housing, Communities and local Government booklet 'Outdoor Advertisements and Signs: a Guide for Advertisers'.

Speed Management

The policies for speed limits and traffic calming are contained in the Technical Annex of the Derby and Derbyshire Speed Management Protocol.

Speed limits and speed limit extensions

Speed limits are introduced to ensure greater road safety and should seek to balance this with accessibility and environmental objectives, improving the quality of life for local communities. Any changes we make to speed limits must adhere to criteria as set out by the DfT.

All roads are subject to a national speed limit except where it is deemed appropriate to adopt a lower speed limit. Under the RTA 1984 the Secretary of State is responsible for setting speed limits on Trunk Roads and the Local Traffic Authority is responsible for speed limits on all other roads. The Road Hierarchy Framework provides guidance on the appropriate use of speed limits for each level of the Road User Hierarchy for the County. However, the use of speed limits will always be subject to individual circumstances, professional judgement and

subject to consultation with the public and Police. The following currently influences national guidelines and criteria.

Local Highway Authorities have powers to impose, vary or remove speed limits on certain roads in their areas.

On all County Council strategic, main and secondary distributor roads, speed limits will be introduced where one of the following is satisfied:

- The DfT's criteria and guidelines are fully met;
- A speed limit extension provides consistency resulting from increased development or improved visibility and effectiveness of the terminal signs will result;
- The proposal is consistent with the status of the road in the functional hierarchy.

On local roads and local access roads speed limits will be considered either where the policies above are met or in addition to provide protection to villages and hamlets.

The County Council's detailed policy on speed limits and extensions is contained within the Technical Annex to the Speed Management Protocol (approved by Cabinet 16/11/16) and included as TA01.

Traffic calming

Traffic calming is an important tool in helping to define the road hierarchy particularly between the local road network and the main distributor routes, discouraging incompatible uses and behaviour and helping to achieve safety and environmental targets. The types of measures cover a wide range of techniques such as introducing physical features to reduce car speeds, safety measures to assist cyclists and pedestrians, speed enforcement measures, landscaping, street furniture and changes in carriageway surface material. The reasons and cost benefits for introducing these types of measures must be carefully considered, as they may not always be necessary or suitable.

Individual traffic calming will be considered where:

- There are no conventional traffic management methods of improving the safety of the road environment;
- After full consultation, there is minimal objection to its introduction;
- Schemes can be introduced which will not prevent or deter bus services from serving the area or village;
- The proposal is consistent with the status of the road in the functional hierarchy.

Requests for traffic calming which satisfy the above will be assessed by taking into account the following factors:

- Total number of accidents or casualties;
- Level of through traffic;
- Number of accidents to vulnerable road users;
- Width of road;
- Daytime/ night time vehicle flow;
- Footway provision;
- Number of HGVs;
- Severance of the community created by the road;

- Provision for cyclists;
- Number of properties affected;
- Traffic speeds and noise levels;
- Distance of properties from road;
- Pedestrian flows;
- Effect upon public transport services.

Priority will be given to schemes that seek to achieve a reduction in recorded injury casualties and meet with the criteria prescribed in the Speed Management Protocol.

Care will be taken to minimise visual damage to the environment, as set out in the Council's 'Traffic Calming and Visual Amenity Environmental Code of Practice' document (TA05 of HNMP).

See TA01 for information on the Council's corporate ranking system (with a bias towards casualty reduction) and other details on traffic calming.

20 mph Limits & Zones (with traffic calming measures)

These can be differentiated as follows:

- 20mph limit, which consist of just a speed limit change to 20mph which is indicated by the speed limit (and repeater) signs, and
- 20mph zones, are designed to be "self-enforcing" due to traffic calming measures that are introduced with the change in the speed limit

20mph speed limit/zones are introduced sparingly, with casualty reduction being the priority for the selection of such schemes.

A number of 20mph zones are in operation in Derbyshire. They should be self-enforcing and so are usually only appropriate where speeds are already naturally low or where a suitable package of traffic calming measures can be used to ensure compliance with the speed limit.

Derbyshire have trialled a number of signed only 20mph limits without traffic calming measures and there has been extensive research carried out by national government on this same subject. However, the conclusions drawn by the County Council revealed that these have limited effect in reducing both speeds and casualties on its network. Therefore these will only be considered in exceptional circumstances.

Safety cameras

The Derby & Derbyshire Road Safety Partnership considers any request for safety cameras.

Permanent Traffic Regulation Orders

Traffic Regulation Orders (TROs) are used to control or restrict the movement of vehicles on the road network, in order to provide the following benefits:-

- Safer passage for all road users in Derbyshire;
- Reduced delays due to fewer obstructions on the Highway;
- Improved access for emergency vehicles and public transport due to a reduction in illegally parked vehicles;
- Higher turnover of vehicles in parking spaces;
- Reduced pollution as a consequence of reduced congestion and circulating traffic.

All Traffic Regulation Orders made by the Authority will be made in accordance with the RTA 1984 or other legal powers.

The County Council follows a procedure when preparing new TROs. This involves consultation with various statutory bodies including the Police, Fire Brigade, Ambulance Service, District and Parish Councils. Any objections received are reviewed by the County Council, to determine whether or not the objector's concerns can be addressed or not. The final decision regarding the introduction of any TRO where objections have been received rests with the officer assigned with delegated powers by the Strategic Director – Economy, Transport & Environment.

The provision of permanent TRO's in Derbyshire follow procedures outlined in the Local Authorities' Traffic Orders (Procedure) (England and Wales) Regulations 1996. The likely timescale for implementation of successful TRO's is between 26-40 weeks, depending on the level of objections received.

Since the introduction of Civil Parking Enforcement a new internal process for managing TRO's has been developed and it is now also possible to view TRO's online. The underlying Traffweb information is derived from the County Council's Geographical Information System (GIS) with the Traffic Regulation Orders (TROs) overlaid.

Procedure to Rank and Prioritise Requests for Traffic Regulation Order is held in TA01.

Temporary Traffic Regulation Orders

Temporary Traffic Regulation Orders will be made, where appropriate to prevent any unnecessary disruption or delays, for safety reasons affecting both road users and also people working in the Highway, and on environmental grounds. These will be implemented at the expense of the promoter for all works other than those being carried out by the County Council or its agents and contractors.

Emergency Traffic Regulation Orders will be made when urgent situations arise where it is considered that the safety of the public or people working in the Highway may be placed at risk otherwise.

One-way streets

In towns, one-way streets are a means of reducing conflicts and improving traffic flows. However, in rural areas they can cause significant detriment by increasing vehicle speeds and creating problems for local access. Proposals to introduce one-way systems in villages are often controversial and rarely supported by the whole community. In general, one-way streets are best avoided wherever possible in rural areas.

The effect on cyclists and equestrians will be evaluated when considering one-way street proposals. Roads will not normally be closed to cyclists unless there are specific safety reasons.

One-way streets will only be considered for safety reasons in rural areas where there is evidence of an injury accident problem that could be resolved by one-way traffic flow.

One-way streets will not be considered in rural areas where:

- Traffic speeds in a village may increase;
- Significant difficulties of access would be created;

- Transferred traffic volumes would cause significant problems elsewhere.

One-way streets will be considered in urban areas where significant improvements can be achieved in safety or network capacity without creating access problems.

Traffic speeds may increase in urban one-way streets.

Waiting restrictions

The use of waiting restrictions can also provide positive traffic management measures particularly in urban areas and may be considered appropriate where:

- Where a road safety problem has been identified by injury collision studies and it is clear that an actual reduction in injury collisions would follow form the introduction of a Traffic Regulation Order;
- Where obstruction of a Highway or of visibility at Highway junctions occurs on a regular, frequent and extremely severe basis, particularly where public transport and emergency service vehicles are affected;
- Where commerce and industry is severely inconvenienced by the presence of parked vehicles. For example - delivery vehicles or refuse vehicles cannot gain access;
- Parked vehicles cause an obstruction to emergency services and where a waiting restriction is supported by the emergency services.

On strategic routes and main and secondary distributors, clearway orders and no waiting restrictions may be employed to ensure that the maximum road space is available for moving traffic. If the routes pass through areas where there are commercial premises fronting the road, peak hour loading bans may be included and it should be the aim to keep all junctions clear of parked vehicles 24 hours a day at least 15 metres from the junction.

Bus stop clearways will be used to prevent parking where necessary at bus stops.

Waiting restrictions will not be introduced if the problem would merely be moved elsewhere.

Waiting restrictions are a traffic management measure mainly applicable to major urban areas where with local enforcement they provide a means of ensuring safe and effective use of road space.

In rural areas where there is little enforcement, waiting restrictions are of limited use. The associated carriageway markings and signs can also be environmentally intrusive in a village environment. The presence of parked vehicles in a village street often has a ‘Traffic Calming’ effect by providing a more tortuous route for traffic and thus reducing speeds.

Existing waiting restrictions will only be amended where a benefit can be identified.

Residents’ parking schemes

Derbyshire County Council’s current Residents’ Parking Policy refers to the types of permit that are available within each scheme, the enforcement agency, the charges for permits and the way the schemes are managed.

Before progressing with a questionnaire to see if a Residents’ Parking Scheme (RPS) is supported, a number of criteria should be met. These are listed below.

- That the location is part of a large urban area where long term on-street parking by non-residents prevents residents from parking near to their properties for the majority of the working day (the working day is taken to be 8am to 6pm, Monday to Friday);
- That the area is of sufficient size to minimise the possible effects of displacement into surrounding streets. Single street schemes should not be considered (unless in an isolated residential location in a district where a scheme is already in operation and running costs are not in a deficit);
- That a large proportion of the properties within the area do not have off-street parking or the ability to install their own off-street parking;
- That provision can be made for visitors to the area;
- That a scheme will be revenue neutral (running costs are met by the income from permit sales).

If these criteria are met, and funding is available, a questionnaire consultation may be undertaken.

The full Residents' Parking Policy including charges is contained in TA06.

Parking places

The County Council will not specifically fund the provision of parking places on the Highway.

Parking is a District/ Borough Council (or local planning authority) function and they may, by agreement with the County Council, finance parking spaces within the Highway. The County Council may contribute to the works if there is resultant benefit to the Highway. Sheltered areas of carriageway suitable for parking may arise out of County Council works, but this will not be the prime objective.

Gating Orders

A Gating Order may be made in respect of a Highway that is facilitating high and persistent levels of crime and/or anti-social behaviour, which is adversely affecting local residents or businesses.

Gating Orders shall be made by either the District or Borough or the County Council in accordance with the Clean Neighbourhoods and Environment Act 2005, Section 2 and the Highways Act 1980 (Gating Orders) (England) Regulations 2006.

Details of making, revising or revoking Gating Orders, including consultation, notification and dealing with objections etc. are contained within the Regulations.

Sections 129A-129G have been inserted into the Highways Act 1980 by the Clean Neighbourhoods and Environment Act 2005, which provide powers to erect, or permit to be erected, a barrier (gate) to restrict public access to a Highway over which the public would normally have the right of passage. Such Highways may range from narrow footpaths or alleyways to those capable of accommodating vehicular traffic.

In the making of Gating Orders the Highway Authority must be satisfied that:

- Premises adjoining, or adjacent to, the Highway are affected by crime or anti-social behaviour;
- The existence of the Highway is facilitating the persistent commission of criminal offences or anti-social behaviour;

- It is, in all the circumstances, expedient to make the Order for the purposes of reducing crime or anti-social behaviour.

Appropriate consultation must therefore take place with relevant stakeholders.

Any Order may restrict the public right of way:

- At all times or for certain times or periods as may be specified;
- May exempt persons of a certain description from the restriction;
- There are exceptions for occupiers and business premises in prescribed circumstances. Access for occupiers of premises adjoining or adjacent to the Highway cannot be restricted, nor can a Gating Order be made if it forms the only or principal means of access to dwellings. If it forms the only or principal access to premises used for recreational or business purposes, it cannot restrict access during the times of day when those premises are normally used;
- There are also exceptions for certain people, such as emergency services and those with a legitimate reason for accessing any premises adjacent to a Highway. In practice, this would involve the provision of keys to such people, or the opening of the gates during certain times/periods when such people would expect to use the Highway. The management of periodic and regular access will be an essential ongoing requirement and accordingly access arrangements must be appropriately considered within the overall risk assessment;
- The powers do not permanently extinguish public rights of way, making it possible to subsequently alter or revoke the restrictions and reinstate the use of public right of way. This effectively means that the land cannot be converted for any other purpose and should still be maintained as a Highway asset.

Response to Bridge Strikes

The County Council will liaise with the relevant bridge authority to discuss access to bridges that have been struck. The ADEPT/DfT document "Prevention of strikes on bridges over Highways: a protocol for Highways managers and bridge owners" is part of the continuing effort to raise awareness to the dangers of bridge strikes amongst all those involved in Highway and infrastructure maintenance to ensure that the frequency of impacts on bridges over the Highway is reduced.

Pedestrian controlled crossings

At present, consideration for new or additional crossing facilities are initiated by the following:

- In response to a direct request , for example – from local residents, other local groups, elected members;
- Where a specific problem for pedestrians has been identified, eg: traffic collisions involving pedestrians, or difficulty in gaining access to shops, etc.;
- As part of a new road or Highway improvement scheme.

The DfT recommends the use of an assessment framework to guide consideration of the need for a pedestrian crossing (the previous assessment methodology was based on mathematical relationship between the vehicle and pedestrian flows taken over four 'peak' hours during the normal weekday – the relationship that was used was PV^2). However, in Derbyshire there was still considered to be a need for some simple, easily understood

measure to act as an initial starting point to see a particular location justifies further investigation and justification for the prevision of a controlled crossing. Since PV^2 is well known an understood it is considered appropriate to use the principle of PV^2 but change the starting point to reflect more fully the current national policy guidance.

Crossing Options

The outcome of this consideration will be one of the following:

- No pedestrian crossing or other facilities required;
- No pedestrian crossing required but some improvements to lighting, signing, etc;
- Seek to manage the traffic through other engineering measures, such as narrowing the carriageway to reduce crossing time;
- Provide a pedestrian refuge island to allow pedestrians to cross in stages, and only have to consider traffic approaching from one direction at a time. In addition the presence of a refuge can help to constrain vehicle speed and may prevent or deter overtaking in the vicinity of a refuge;
- Provide a zebra crossing – The DfT in its guidelines recommends that where a crossing is thought necessary, but pedestrian flows are relatively low and traffic flows are no more than moderate then a zebra crossing may be suitable. Zebra crossings give pedestrians priority which minimises delay;
- Provide a signal controlled crossing (Pelican, Puffin, Pegasus or Toucan) – The DfT guidance indicates that signal controlled crossings are used where:
    - Vehicle speeds are high, and other crossing options are thought to be unsuitable;
    - There is a greater than average proportion of disabled or elderly pedestrians in the vicinity;
    - Vehicle flows are very high and pedestrians have difficulty in asserting their presence;
    - There is specific need for a crossing for cycles or equestrians;
    - Other traffic management measures in the vicinity could confuse pedestrians;
    - There is a need to link with adjacent signal controlled junctions or crossings;
    - Pedestrian flows are high and delays to vehicle traffic would otherwise be excessive.
- Provide a pedestrian stage within an existing traffic controlled junction – this may take the form of an all red phase in the signals, when all the traffic is stopped, or may involve and offset pedestrian facility that allows pedestrians to cross each arm of the junction as traffic is stopped.

Assessment of Pedestrian Crossing Facilities

The decision on type of crossing to be provided is influenced by the following factors:

- Location/Surroundings;
- Vehicle and pedestrian flows and composition;
- Vehicle speeds;
- Difficulty in crossing;
- Collision record;
- Local representation;
- Community severance;

- Cost (including maintenance).

As a general rule, certain types of crossing facility are likely to be more appropriate for certain types of Highway use. These are shown below:

	Types of Road
Pedestrian Refuges	Residential road and local distributors with flows of up to 3,000 vehicles per day (VPD)
Zebra Crossings	Local distributors with flows greater than 3,000 VPD, and district distributors, with flows of up to 6,000 VPD
Signal Controlled Crossings	District distributors with flows greater than 6,000 VPD, and principal routes

Prioritising Requests

The County Council receives as substantial number of request for pedestrian crossing facilities from local residents and other groups. The assessment framework is therefore used to assess and prioritise these requests for pedestrian crossing facilities.

The requests are separated into residential roads; local distributors; district distributors; and principal roads for comparative assessment, dependent on traffic flows. The approach is a guide and is not intended to be too prescriptive and the final choice of pedestrian crossing or other measure will be dependent on the individual circumstances of each location and take into account special cases determined through the assessment framework.

An initial assessment is undertaken and requests within each group are sieved as part of this prioritisation process. The sieving criteria are based on a measure of pedestrian/vehicle conflict, for example: PV^2 (where P is the pedestrian flow and V is the vehicle flow). Those sites that satisfy the criteria form this initial sieving exercise will then be subject to detailed assessment.

The resulting recommendations from the technical assessments will be considered by officers for a final decision on the shortlisted priority locations and the measures to be implemented.

Request and petitions for enhanced pedestrian crossing facilities will be added if approved to future year's capital programmes or other funding opportunities.

Potential sites for controlled crossings that fail to satisfy the requirements will be considered for other possible ways of assisting pedestrians including refuges, widening of footpaths and traffic calming measures.

Where road humps are used as a traffic calming measure, zebra crossings will be incorporated with the road hump if the site satisfies the requirement for the provision of a zebra crossing.

Pedestrian refuges, road narrowing and link footways

Before pedestrian refuges are provided on any road where there is no street lighting, careful consideration will be given to any likely problems or dangers caused.

Road narrowing will be considered where there is a need to reduce vehicle speeds, improve visibility at junctions, and reduce the crossing width for pedestrians.

Where possible, road narrowing will be used as part of an area-wide scheme incorporating parking bays and environmental improvements.

In all cases where a pedestrian refuge or road narrowing is being considered, careful attention must be paid to the needs of local parking, accesses and cyclists.

Link footways will be considered at locations where a demand is identified and provision is justified by the assessment and ranking system.

Pedestrianisation

Support the provision of pedestrian priority areas where appropriate.

The County Council will support pedestrianisation of main shopping areas where appropriate in urban centres to improve and enhance the shopping environment or where other benefits from the removal of general through traffic will accrue.

Careful consideration will be given to the needs of people with impaired mobility, traders and the maintenance of access for delivery of goods and emergency services and where possible to ensure access for buses close to shops and other likely destinations.

Full public consultation will be an essential part of any proposed scheme and the scheme will be developed in close co-operation with traders, local Councils and access groups.

The County Council must be satisfied that diverted traffic can be accommodated safely and conveniently on the surrounding road network.

Consideration will be given to the quality and local distinctiveness of the environment and special attention given to Conservation Areas and the setting of listed buildings and Scheduled Ancient Monuments.

District and Borough Councils will be encouraged to contribute to the environmental enhancements offered by schemes.

NETWORK MANAGEMENT AND CO-ORDINATION

The key activity in providing proactive management of the Highway network is good quality forward planning and co-ordination of works, events and activities that impact on the Highway network.

The TMA and associated guidance provide the means for the County Council to take action to ensure any planned activities minimises the impact on the road user.

The day to day work to assess and process proposed activities on the network is carried out by the Streetworks Team in the Highways Hub.

Anyone wishing to work in the Highway must apply to the County Council giving details of work proposed, accurate locations, start and finish times. This ensures that all works planned on the Highway can be managed and co-ordinated and that all other operations and events that impact on road users are subjected to similar controls.

Non-compliance with the TMA by a utility company (i.e. failure to either issue or carry out works in compliance with the permit scheme) will result in enforcement action by the County Council.

Compliance with the TMA notification procedures is also a requirement for the County Council's own Highway works, the performance of which will be monitored and reported to demonstrate parity with utility works.

The County Council has established procedures for co-ordination of road works via a system to receive electronic permits/notices as appropriate. Any conflicts are managed by the Streetworks Team in association with the works promoters. Works in the Highway are published on Roadworks.org website to inform on current and planned proposals. Link: roadworks.org

Highways and Utilities Collaboration

Derbyshire County Council is an active member of the East Midlands Highways and Utilities Committee (EMHAUC).

This acts as a regional focus for the national body HAUC England.

EMHAUC provides a forum for discussion, exchange of information and improved professional relationships. In addition the work of the committee promotes co-operation between the utilities, Highway authorities and any other parties involved with street works activities, with particular reference to the NRSWA 1991, the TMA 2004, and other relevant legislation.

These aims of the forum are to:

- Utilise all relevant Codes of Practice and Specifications with a view to working towards a consistent approach.
- Identify topics where there will be scope for Best Practice initiatives, leading to implementation and possible promotion to other bodies for their consideration/adoption.
- Provide a free flow of information between organisations.
- Explore all avenues and options designed to reduce the:
    - Effect of work activities upon Highways and Highway users.
    - Incidence of damage and to minimise the risk of injury.
- Assist and support local co-ordination meetings by:
    - Providing guidance.
    - Acting as an advisory forum in case of local disputes where good practices are an issue.
    - Disseminating information on regional and national issues.
- To monitor the performance regionally of Utilities, Transport and Highway Authorities under New Roads and Street Works Act in the interests of best practice.

EMHAUC is supported by Streetworks UK and EMJAG (East Midlands Joint Authorities Group).

Electronic Permit and Notice Notification

As part of the NRSWA 1991 and to provide an efficient and timely noticing system, a national specification for street works notices was introduced. As street works coordination processes and systems have evolved this specification has been updated to ensure that utility companies and local Highway Authorities are working with compatible systems.

Highways Hub

One of the main purposes of the Highways Hub is to develop long term policies and strategies to reduce delays and improve general network management. This is achieved by ensuring works promoters, utilities and Highways authorities adhere to national legislation such as the TMA 2004 and the NRSWA 1991. The Highways Hub provides legislative advice to colleagues on TMA and NRSWA matters; collates and analyses data and implements and reviews performance measures. The Highways Hub are also responsible for providing Permit Evaluation Reports for the permit scheme.

Network Regulation Compliance Data

The monitoring of the network management processes is essential to ensure that the road works occupancy, coordination, noticing quality, reinstatements and safety issues are being managed effectively in compliance with the TMA 2004.

The Streetworks Team is responsible for the production of statistical information relating to both Highway Authority and Statutory Undertaker noticing in order to develop Performance Indicators.

Permitting

The main purpose of a permit scheme is to minimise disruption from unnecessary or badly controlled road works. There are many additional expected benefits to be achieved through more effective control of road works, which include:

- Improving journey times and reliability for all our road users;
- Reducing the congestion caused by road works;
- Improving the information available on works, including advanced warning and duration;
- Increasing the planning and control of works to improve safety and reduce damage to the road.

The scheme covers the following streets:

- Category 0, 1 and 2 streets,
- Category 3 and 4 designated traffic sensitive streets.

Category 3 and 4 non-designated traffic sensitive streets continue to be covered by NRSWA legislation. It is considered that a permit scheme on these streets would provide limited benefits of reduced delays on these quieter roads.

Details of the scheme can be found at the following link: Highway Permit Scheme

HAZARDS ON THE HIGHWAY

The County Council has a duty to maintain the Highway in a safe condition.

Defects identified that pose a threat to life are considered an emergency and must be responded to, normally within 2 hours, and made safe or repaired urgently.

Defects on the Highway will be made safe either by removal or by erecting warning signs, barriers and/or lighting following the guidance in the Highway Infrastructure Assets Safety Inspection Manual.

Examples of commonly encountered issues include:

Trees

Fallen trees or branches that are obstructing the Highway will be cleared and either removed from site and correctly disposed of or left in a safe place, if privately owned, for the owner to remove.

Hazardous materials and spillages

Spillages can be hazardous either from the nature of the material e.g. toxic products, or from the effect on the road surface e.g. mud. Depending on the material concerned other agencies might be required to carry out the clearance and correct disposal. Advice will be obtained from the emergency services. All spillages will be made safe, either by clearing or by signing and barriers.

Bodily fluids and tissue will not be removed by County Council personnel but by an approved contractor. This may delay the opening of a Highway after an incident, but it is considered essential for health and safety reasons.

Road traffic collision and vandalism

After a road traffic collision accident the Highway will be made safe for traffic to pass freely as soon as possible in consultation with the emergency services

Collision and vandalism damage will be repaired according to assessment of need on a priority basis. Efforts will be made to identify those responsible for causing the damage and the cost of repair recovered. The repair cost should also include associated administrative charges.

If sites of persistent vandalism or damage are identified, consideration should be given to the removal of the item or replacement with a design or product which is vandal resistant.

Mud, debris or dung on the Highway

Section 161(4) of the Highways Act 1980 creates an offence of allowing any filth, dirt, lime or other offensive matter to run or flow onto the Highway from adjoining premises for which an offender may be summonsed to appear before a Magistrates Court.
The presence of mud, debris or dung on the Highway shall be risk assessed to determine the appropriate action, including temporary signing and the clearing of the hazard as soon as possible.

If known, the person responsible will be instructed to clear the hazard as soon as possible. They will be instructed to make arrangement to remedy the cause of the mud or debris if this is likely to reoccur.

If large amounts of mud, debris or dung are present on the Highway and if the person responsible is unable or unwilling to deal with the situation within a reasonable timescale, arrangements will be made by the Highway Authority for the area to be cleansed.

The person responsible will be recharged the cost of the cleaning operation.

In the rare event that the deposit of mud, debris or dung has been found to be unavoidable, consideration may be given to the erection of permanent signs to diagram 557 of TSRGD, warning that the road may be slippery. Link: Traffic Signs Manual Chapter 4

Event Management

The County Council has established management processes for the co-ordination and control of planned events on or off the Highway network to minimise their impact on other Highway users and ensure effective liaison with promoters of other known road works.

The County Council works with event organisers, venue owner, and local government organisations within Derbyshire to establish a calendar of the regular events.

Every event that takes place on the Highway within Derbyshire is required to be registered with the Highways authority in order that the traffic management arrangements can be co-ordinated. This will ensure that the event can be held successfully and is not compromised by other planned work on the Highway network.

Regular event meetings (Safety Advisory Group meetings) are organised at a district council level and involve local divisional Highway officers, the emergency services, district council officers and the event organiser.

Safety Advisory Group meetings assist the event planning process to ensure that events take place safely and at a time and in a manner that has the minimum effect on network operations. In addition, the meetings enable the dissemination of accurate information regarding the events as early as possible to other organizations. For example, it allows the County Council to manage the provision of increased or altered public transport to ensure the safe and efficient passage of visitors to the event.

Further information on event planning is available on the Derbyshire Prepared website.

Where events occur on a regular basis, the way in which each event is planned and managed is reviewed on completion of the event to ensure that procedures are efficient and up-to-date and that the needs and demands of the travelling public are fully met.

It is recognised that the promotion of all events brings increased commerce and trade to the area and fosters a sense of well-being and community spirit. Therefore the County Council are committed to supporting well planned events held across the County.

These events may cause delay and there are two aspects to this. Firstly, is that of road users who find their journey is affected by such events and secondly, the effects for those who are trying to attend or participate in the event.

In order to demonstrate a robust management system for planned events on or near the Highway network the Authority is liaises with Local District authorities within Derbyshire and also the Highway authorities which are adjacent to Derbyshire. Many organisers of annual events are well aware of the processes and apply to the County Council or District Councils as appropriate. These events require co-ordination with other Highway management issues such as road and street works, road closures and other matters taking place on the Highway.

The County Council will give consent to the closure of a street for the purpose of a street function where the necessary conditions are met.

The DfT has advised that District Authorities may exercise their powers under Section 21 of the Town Police Clauses Act 1847 to make orders closing streets to vehicular traffic for the purpose of public rejoicing. Any necessary signing can be done under the powers in the RTA 1984

Alternative powers exist under Section 287 of the Highways Act 1980 which enable a District Authority to cause barriers to be erected in any street which is likely to be thronged or obstructed by reason of some special attention.

This alternative power is simpler to operate than the Town Police Clauses Act as it does not involve making an Order. The consent of the County Council as Highway Authority is necessary to the erection of any barriers under Section 287.

Conditions and duties will need to meet the requirements of the TMA 2004.

ACTIVITIES WITHIN THE HIGHWAY

The County Council has a duty to maintain the Highway in a safe condition. Any activity, signs, roadside trader's operation, etc. that is considered to be compromising the safety of any Highway users will be removed in pursuance of its powers under the Highway Act 1980.

The County Council is committed to keeping our Highway free of obstruction, particularly pavements, for the benefit of all Highway users. We try to balance the street scene and the needs of the public, including those with visual or mobility difficulties, when assessing the degree of obstruction or nuisance.

The County Council may licence certain activities within the Highway under its powers in the Highways Act 1980 subject to the applicant complying with the conditions set out in the relevant licence and guidance on these are set out below:

Amenity Objects in the Highway

The County Council may issue a licence under Section 115E of the Highways Act 1980 to grant permission to site objects such as signs (including as part of roundabout sponsorship), planters and other items in the Public Highway.

It is an offence to site any sign, planter or other object in the Highway without permission and when the County Council is made aware of an obstruction it will be risk assessed in line with the policy in the Highway Infrastructure Assets Safety Inspection Manual.

When an application is made the proposal will be assessed for suitability, taking into account the proposed object and its proposed location. Applications will be refused if a hazard would be created.

Applicants are advised to check with their local District or Borough Planning Department to ascertain whether planning consent is required.

Applicants are advised not to purchase any signs or other objects until it has been confirmed that their application has been successful. They must also hold Public Liability Insurance of at least £5m.

An object at a proposed site with a speed limit of 50mph or above and or a site where the authority holds information relating to road safety concerns the objects will be required to be constructed of a material that complies with additional safety regulations – these are usually more expensive than regular design materials. The Traffic and Safety Team can advise for proposals at these locations. However, it is more likely that an application will be rejected due to the necessary additional restrictions.

For the erection of signs, the applicant must check that the installer holds Public Liability Insurance of at least £5m and holds a relevant Street Works Qualification to undertake excavation in the Public Highway.

For all other items, (e.g. planters), the applicant must check that the installer is aware of the need to work safely in the Public Highway and adopts safe methods of working, including traffic management measures and high visibility clothing in accordance with "Safety at Street Works & Road Works".

Attachments to Street Lighting Columns are not covered by this licence. Guidance on this is found on the Derbyshire website

Street café licences

The County Council may issue a licence under section 115E of the 1980 Highways Act. This is designed to ensure cafés operate safely and attractively without interfering with other legitimate uses of the street.

Operating a street café without permission is unlawful. Planning permission may be required for the use or for any ancillary works and this must be clarified with the local planning authority for the area. Contact your planning authority if in doubt about whether permission is required. Appropriate public liability insurance is required.

Further details on Street Café Licences are held in TA09

Development Area 1: Street Café Licencing

The policy related to street café licencing is currently under review.

Builders skips on the Highway

Under section 139 of the Highways Act 1980, skips may only be deposited on public Highway (this includes a footway, verge or road) with the permission of the Highway Authority through the issue of a skip permit to the skip owner and will be subject to the current fee. Skips will be required to be signed, coned and lit at night in accordance with the conditions stated on the permit.

The Highway Authority may refuse the application where the applicant has space within their own curtilage to site a skip to prevent obstruction to traffic and potential damage to the Highway.

The Relevant Officer will assess the suitability of the proposed site and may impose conditions on the placing of the skip as necessary. This may involve restrictions as to location, timing or a refusal to grant permission if a hazard would be created.

Permits will be issued for a maximum duration of 1 week on A & B Roads and 2 weeks on C and unclassified. A new permit is to be issued for renewals exceeding the relevant period which will incur further charging of the current fee.

The placing of a skip will be subject to the skip company providing written evidence of possession of the appropriate level of public liability insurance.

The authority will make local arrangements for dealing with the removal of unauthorised skips.

Builders skip application details are held in TA08

Scaffolding, Hoarding & Work Platforms

Scaffolding, hoardings or other work platforms will only be permitted when the safety of the public is fully protected and disruption of traffic kept to a minimum and a current permit issued.

The work promoter may be required to provide assurance that the scaffolding/hoarding will be in place for the minimum time necessary to carry out the work for which the scaffolding/hoarding is required. This may include details of the works and programmed working hours.

Applications for scaffolding/hoarding will be charged for at the current rates as detailed in TA07.

Unauthorised encampments on the Highway

The County Council has a Gypsy and Traveller Liaison Officer and appropriate protocol. When the Highway Authority becomes aware of an unauthorised encampment the Gypsy and Traveller Liaison Officer will attend site for an assessment. Each unauthorised encampment is assessed on a case by case basis and the appropriate action will be taken as required.

Advertising and obstructions (including retail displays and street cafés)

(Note: The contents of this section supersedes the County Council's previous policy on Street Café Licences approved 12 January 2009)

The County Council has a duty to maintain the Highway in a safe condition. Any advertising or other obstructions that are considered to be compromising the safety of any Highway users will be removed in pursuance of its powers under the Highways Act 1980.

The County Council is committed to keeping our Highway free of obstruction, particularly pavements, for the benefit of all Highway users. We try to balance the street scene and the needs of the public, including those with visual or mobility difficulties, when assessing the degree of obstruction or nuisance.

Planning permission may be required for a proposal and this must be clarified with the local planning authority for the area. However, any such approval will not affect the County Council's duty to keep the Highway safe.

Other than roundabout sponsorship the County Council does not formally licence anything causing an obstruction placed specifically for advertising/trading purposes. Guidance on the Environmental Sponsorship of roundabouts is held within the Highway Network Management Plan (HNMP) TA09: Sponsorship of roundabouts & verges

However, it may grant licences for the sighting of amenity objects such as planters or art installations, etc. (see the section on Amenity Objects in the Highway).

When the County Council is made aware of an obstruction it will be risk assessed in line with the policy in the Highway Infrastructure Assets Safety Inspection Manual.

Roadside trading (including mobile catering units)

The County Council has a duty to maintain the Highway in a safe condition. Any roadside trader's operation that is considered to be compromising the safety of any Highway users will be removed in pursuance of its powers under the Highway Act 1980.

We do not currently give specific consent or charge traders in respect of roadside catering vehicles.

Roadside trading is technically a Highway obstruction unless permission is granted by the Highway Authority under Section 115 of the Highways Act 1980.

However, it is recognised that such facilities can provide a useful service to the travelling public and local businesses.

The County Council will therefore offer general advice for what might be considered good practice which may avoid the need for enforcement action in the future. This includes reference to other authorities and organisations who may need to give approval for the roadside operation. However, any such approval will not affect the County Council's duty to keep the Highway safe.

Private items or memorials placed on the Highway

The practice of laying flowers or other tributes at the site of fatal road traffic collisions is becoming increasingly common. These can be a source of comfort to bereaved friends and families.

There is concern, however, about the safety of friends and families who may come to visit the site and the risk that memorials could be a distraction to other drivers.

We recognise that this is a sensitive issue and we have sought to develop an approach that balances concerns about safety and the wishes of those who may want to lay flowers or place other tributes as a mark of respect. These guidelines are set out in TA04.

Highway boundaries

We are required under Section 36(6) and (7) Highways Act 1980 to keep up-to-date and available for public inspection a list of streets which are highways maintainable at public expense. Our records are held in a linear format on a map background.

Motorways and trunk roads within Derbyshire are the maintenance responsibility of Highways England.

The legal definition of a highway includes any road or way over which the public has a right of passage. The list of streets therefore includes some public bridleways and public footpaths as well as public carriage roads (including any associated footway or verge).

Certain highways may historically have been publicly maintainable. Others may have become publicly maintainable through legislation or, more recently, through legal agreement following which they become maintainable at public expense by the highway authority or, for motorways and trunk roads, Highways England

The County Council offers a service to provide extents of Highway including boundaries with full details in TA11.

Works on the Highway

All works on the Highway will be carried out as quickly as possible, wherever practical and economical, to reduce inconvenience, delay and danger to users of both carriageways and footways.

All materials and signage will be cleared and reused, recycled or correctly disposed of from the Highway. The Highway shall be left in a clean and tidy condition at the termination of the works, and any damage caused to the footway and carriageway during occupancy will be made good to the satisfaction of the Highway Authority.

Special requirements of British Waterways, the Environment Agency, Water and Sewerage Companies, Department for Environment, Food and Rural Affairs and the Police will be adhered to.

Where a temporary footway is provided, its surface will be of an adequate standard for use by people with personal mobility needs. Temporary footways should always be kept clear of mud and other loose material and pedestrian access to properties will be maintained.

Ensure adequate provision is made for pedestrians during roadworks in accordance with "Safety at Street Works & Road Works".

Where the normal pedestrian route is severely interrupted, pedestrian direction signs will be provided.

Physical barriers will be of reasonably solid construction, brightly coloured, include a tapping rail and, where appropriate, illuminated at night.

Materials storage or excavation in the highway

Building materials should not be placed upon the Highway and should be contained within the construction site. Materials storage will only be allowed in exceptional circumstances and then only subject to the prior approval of the Highway Authority who can licence this under Section 171 of the Highways Act 1980. See TA12.

Traffic Management at Roadworks

All roadworks are to be signed in accordance with Chapter 8 of the Traffic Signs Manual.

The aim of traffic management at roadworks is to strike the right balance between providing the contractor with sufficient space to carry out the works efficiently and safely and minimising delays to road users. Where work is programmed in a traffic sensitive street off-peak or out of hours working will be expected and accepted in appropriate situations with proper safeguards.

The TMA places a network management duty on the County Council to keep traffic flowing, taking account of the Council's other duties and responsibilities, and to co-operate with other authorities to the same end.

Road closures and other temporary traffic management proposals

All proposals for temporary traffic management at any site must be considered to ensure that they minimise disruption to the public consistent with public safety. Temporary traffic orders will be made where appropriate to maintain traffic flows where otherwise delays might be

caused, especially at roadworks. The suitability of a temporary order at any site will be judged on its individual merits.

These policies apply to all works on the Highway including consideration of Statutory Undertakers' proposals. Environmental considerations (e.g. noise in residential areas) may outweigh other factors in making decisions on allowable methods of working.

There is a presumption against 24-hour closures (even one-way) unless the works are continuous or cannot be opened due to safety reasons.

Every effort will be made to arrange a method of working to avoid the need for closure. The cost of carrying out the works will not be accepted as a factor in determining the need for closure and the cost of preparing and implementing an order will be borne by the scheme promoter. Public safety and convenience are the main considerations.

If a closure is necessary, it must be for the shortest possible time and avoid peak hours if at all feasible.

Any works which need to be carried out under a closure or other form of traffic management will, where possible, be carried out at times of low traffic flow and avoid peak traffic times. Comprehensive publicity and diversion route signing will be provided.

When any temporary order is advertised, residents and businesses affected directly will be advised of the actual expected duration of the closure.

CIVIL PARKING ENFORCEMENT

The Authority has responsibility for on-street parking.

One of the key objectives of managing the Highway network is to manage traffic congestion. The enforcement of parking restrictions plays an important part in effective traffic management and improving traffic flow.

All road users, residents, businesses and visitors benefit from effective enforcement of parking restrictions and the reduction in the problems caused by incorrectly parked vehicles.

Parking Policies

The County Council's Parking Enforcement policy is available on this website.

Sharing Information on Parking Enforcement

The County Council produces an annual report on the operation of Civil Parking Enforcement which is required by DfT.

Parking Finances

Funds raised from penalty charges are used in accordance with RTA 1984 and TMA 2004.

The principle on how this is spent is that the provision of the parking service is the first priority. This includes the enforcement service, the Penalty Charge Processing service and County Council parking management costs. If after such expenditure there is any surplus then this can be applied to:

- Public transport improvements;
- Road improvements;

- Environmental improvements (includes recreational & scenic improvements).

INTELLIGENT TRANSPORT SYSTEMS

Intelligent Transport Systems (ITS) take advantage of advances in transport, computing and communications technologies to improve the efficiency of the road network. It improves decision making by network operators and provides better integrated control of transport systems thereby reducing congestion.

ITS use in Derbyshire is as follows:

- Monitoring of traffic congestion within the network;
- Traffic signals monitoring to minimise delays and queues;
- Incident management systems which then reduce the effects of incident related congestion;
- Facilitation of traffic flow through and around new development construction sites through the deployment of traffic management and incident management systems;
- Provision of road user information including network conditions and roadworks accessed in a variety of ways such as internet websites, telephone as well as television and radio;
- Camera systems for traffic signals and speed enforcement including average speed detection and emergency vehicle priority through traffic signals;
- Strategy management plan production to deal with specific events on the Highway network.

Whilst it is acknowledged that the use of ITS can be used to assist in the management of effective traffic flow and to improve the working successes of features such as bus and cycle lanes, historically the costs and associated benefits of ITS have not justified investment within Derbyshire. However, with the continued improvements in cost and technology of ITS the cost of a system is becoming more viable for the use in medium and small towns.

In 2009 the Secretary of State gave optional powers to local Highway Authority under The Transport Act 2000 to enforce the misuse of bus lanes. Such moving traffic offences are best dealt with by the use of intelligent CCTV systems.

The Authority will continue to monitor the physical costs of ITS along with operating costs to ascertain the time at which costs and benefits match the Derbyshire conditions and will at that time bring forward recommendations as to the adoption of ITS.

In areas outside the Urban parts of the County an extensive system of speed and flow detectors have been installed at key locations. Consideration is being given to upgrade these facilities working in partnership with the Greater Manchester Traffic Management Team.

The Authority is also acting as lead authority to the East Midlands Local Traffic Authorities in the development of the improved measurement of flows and congestion on the rural main traffic network. The project involves all the local authorities who are partners with the East Midlands Traffic Management Forum.

However the benefits of the use of individual sets of traffic signals or linked sets should not be underestimated in the management of delays and congestion in the network. They can also offer a road safety improvement for all road users by incorporating such facilities as

pedestrian phases. Other pedestrian facilities can be offered via uncontrolled traffic islands, zebra crossings and controlled crossings.

The overall object is to reduce delay and congestion efforts for all road users whilst maintaining or improving road safety aspects for all by re-examining traffic signals to assess how pedestrian priorities can be improved, and to continue to make use of pedestrian refuges.

Traffic Signal Systems

Traffic signal installations will be provided where it is appropriate, to minimise congestion and delays, and in some cases, to manage traffic flow and make provision for pedestrians or cyclists. They will also be introduced where a need is identified by a collision reduction study.

Traffic signals will be set to balance the needs of and minimise delays to all road users including pedestrians. They will therefore not normally be provided for the sole purpose of providing access to private development. Where appropriate, they will be set to favour routes on the primary road network over roads of a lower classification in the roads hierarchy.

Signals in urban areas shall be biased towards minimising delays suffered by inbound traffic in the morning peak; minimising delays suffered by outbound traffic in the evening peak and minimising delays suffered by pedestrians during all off peak times.

All signals are to operate under MOVA or isolated VA control, unless part of a co-ordinated control system. Signals controlling junctions are to have a remote monitoring system installed.

Traffic signals play a key role in reducing traffic congestion and overall delay on the road network. The County Council is committed to using available and new technology to improve the efficiency of traffic signal operations.

Traffic signals play a vital safety role at junctions by ensuring proper control of conflicting traffic movements on the Highway network.

Controlled pedestrian/cycle crossings can be located at junctions or at other locations where need has been identified, to provide safer crossing points. The Authority has a programme of updating signalised pedestrian crossings to offer facilities for disabled persons

Pedestrian facilities can be Pelican, Puffin, Toucan and Pegasus type crossings. Pelican crossings provide controlled crossings for pedestrians only and offer the pedestrian a fixed amount of time to cross the road. Puffin crossings are for pedestrians only and these crossings use pedestrian detection equipment to improve the safety and efficiency of their operation. Toucan crossings generally provide similar facilities to Puffin crossing, but also include provision for cyclists. Pegasus crossings have dual height controls where horse riders regularly wish to cross the road.

The Traffic Signals Team is responsible for the day-to-day management of the traffic signal installations and associated computer systems in the County, including the management of the traffic signal term contractors.

Traffic Signal Data

Data from the traffic signal systems is used to obtain traffic flows on the network for performance monitoring and reporting purposes.

Traffic Signal Installation and System Checks

The County Council carries out bi-annual inspections of its traffic signal equipment and validates the operation of traffic signal installations at least once every three years to ensure the safety of signal timings and also to check on the efficiency of timings compared to observed traffic flows.

Traffic Signal Design

Design work is assessed with vehicle flows for both base and future year scenarios before any work is implemented on site. The signal modelling is carried out using industry standard software.

All traffic signal design is carried out within a quality system complying with ISO 9001 and in accordance with national standards, local standards and safety audits.

Pedestrian phase at traffic signal controlled junctions

Include pedestrian phases in new traffic signal schemes, wherever appropriate.

Where a significant pedestrian demand exists at a junction, pedestrian facilities shall be incorporated within a signalled junction layout or at a remote, but linked, signalled pedestrian crossing. Facilities and their operation will be designed so as to provide the best balance between pedestrian and traffic demand, commensurate with the demands of road safety.

Where a significant demand exists at a junction but it is not possible within the policy to incorporate signalled pedestrian facilities every effort shall be made to provide the safest possible pedestrian route by the provision of refuges, dropped kerbs and pedestrian barriers.

Temporary Traffic Signals

The Highway Authority must approve the use of all temporary traffic signals; approval can take up to six weeks, although simple installations on minor roads can usually be approved within two weeks. The signing and treatment of side road junctions within or close to the temporary signals must be approved as part of the application. All signal arrangements must comply with Chapter 8 of the Traffic Signs Manual. On strategic roads, two sets of portable traffic signals must not be used within 5 km of each other, and on main and secondary distributors, two sets must not be used within 1 km of each other. In special circumstances, the Highway Authority may relax this condition at certain times of the day. Signals should be removed at the end of the working day where possible.

If traffic control is required where a side road or major access enters the controlled section consideration must be given to:

- A method of work to avoid the use of signals or the use of a traffic regulation order to restrict the use of the side road or access by road closure or one-way operation;
- The use of shuttle working signals on the major road with the side road uncontrolled. This form of control is only to be used when the side road carries a low traffic flow and a driver waiting on the side road can see queues of traffic waiting on the main road in both directions;

- The use of shuttle working signals on the major road with a stop/ go board on the side road. This form of control is only to be used where the side road carries a low traffic flow and where the operator with the stop/ go board can see either the queues of traffic waiting on the main road in either direction or the indications on the controller. This form of control must not be used during the hours of darkness;
- Multi-approach temporary traffic signals that control all approaches to the controlled section.

Where roadworks do not include a junction but one is so close that difficulties may be encountered the Highway Authority may require the controlled section to be extended to include the junction and multi-approach signals for the duration of the work.

If traffic control is necessary adjacent to permanent traffic signals consideration should be given to the use of stop/ go boards, in conjunction with the permanent signals or switching off the permanent signals and replacing them with temporary signals for the duration of the work.

Temporary traffic signals cannot be made to work in conjunction with permanent signals.

CCTV equipment on the Highway

For the purposes of targeting crime and anti-social behaviour, CCTV equipment may be installed on a permanent or temporary basis subject to the approval of the Highway Authority.

A temporary installation is one where CCTV equipment is fixed to a street lighting column for a maximum period of 3 months to target crime and anti-social behaviour as required. A permanent installation is one that is sited on a purpose built post (or with written manufacturer approval on standard column) to address longer-term issues.

These processes are detailed in the Guidance Notes for the Erection of Permanent or Temporary Attachments onto Highway Lighting Columns and the Application Form found in TA10

Temporary CCTV equipment belonging to 3rd parties in the public Highway can be installed and removed by the Highway Authority (on a rechargeable basis) or alternatively private contractors who have the necessary accreditations and competence to carry out safely all elements of the works within the public Highway. The specific requirements are stated in the guidance notes. Maintenance of temporary CCTV equipment is the responsibility of the owner of the equipment and can be carried out once removed from the lighting column.

Permanent CCTV equipment belonging to 3rd parties, including ducting and associated connection to power supply, shall only be installed, maintained and removed by private contractors who have the necessary accreditations and competence to safely carry out all elements of the works within the public Highway. The specific requirements regarding attachments to street lighting are covered in HNMP TA12.

The promoter is required to undertake suitable risk assessments, which must include the potential effect of any nearby vegetation on camera sight lines. As part of the application process, permanent CCTV equipment including supporting posts shall be subject to aesthetic approval in terms of construction and location to ensure that visual intrusion and street clutter is kept to an absolute minimum.

CCTV Equipment will only be permitted on lighting columns that are in good condition. All column testing required will be organised by the applicant at their expense. The lighting column should have no other existing attachments and the loading should not be greater than that experienced from the mounting of a solid sign not exceeding 0.3 sq.m. The promoter will be required to provide structural calculations to demonstrate this prior to works commencing.

Real Time Passenger Information

A total of 118 Light Emitting Diode (LED) Real Time Information (RTI) signs have been put up at key bus stops in the Amber Valley, Erewash, North East Derbyshire and Chesterfield areas. A further 17 larger Thin Film Transistor (TFT) display RTI signs have also been installed at Alfreton, Clay Cross and Chesterfield bus stations.

These display real time departure information for Stagecoach Yorkshire, Stagecoach East Midlands and Trent Barton services in these areas. Scheduled departure times for services operated by other bus companies in these areas are also displayed on these signs and the intention is that these should become real time as more bus companies provide information to the system.

These signs former part of the larger D2N2 RTI system which covers Derby, Nottingham and Nottinghamshire as well. The back office systems for this are run by Nottingham City Council on our behalf.

The cost of these works is being covered by funding from the Derbyshire Highway Hub Active Real Time information (DHART) and A61 projects. Should additional budget become available it would be easy to add additional signs to the system in these areas.

A trial of solar powered RTI signs is also taking place with 2 signs in the Heanor and Langley Mill area. The signs use E ink display, as this technology uses less power than LED or TFT. Should the trial show that solar panels can provide sufficient power to display reliable real time departure information, this technology could be used elsewhere in Derbyshire where it is not possible to provide a conventional power supply at more remote bus stops.

Real time information on services is also provided by the Stagecoach and Trent Barton phone apps and the regional schemes such as the Robin Hood mobile phone app.

As part of the A61 and DHART project work is also taking place to provide greater priority for buses at traffic signals using a variety of methods including links to the real time information feeds and a more general bus SCOOT (Split Cycle Offset Optimisation Technique) intelligent transport system.

Provision of Traffic and Travel information

Publicly available live traffic information is available on various web platforms. The national roadworks database, Roadworks.org, shows all street works, including traffic management and diversion routes.

Local radio also gives regular updates from details given by listeners and some CCTV cameras (where available). In addition the County Council will also issue media releases where schemes are likely to have a major effect on traffic in accordance with the County Council's Communication Plan.

TECHNICAL APPENDICES

TA01 – Speed Management Protocol Engineering Technical Annex

Link: Speed Management Protocol Technical Annex

TA02 - Scheme of Delegation

Link: Scheme of Delegation

TA03 – DCC's Environmental Code of Practice - Highway Signs

Link: Highway Signs Environmental Code of Practice

TA04 – Roadside Memorials

Link: Roadside Memorials & Tributes

TA05 – Highway Infrastructure Asset Management Strategy & Plan

Link: Highway Infrastructure Asset Management Strategy

TA06 – Residents' Parking Policy

Link: Residents Parking Policy

TA07 – Scaffolding or Hoarding Licence

Link: Scaffolding or Hoarding Licence

TA08 – Skip Permit

Link: Skip Permit

TA09 – Street Café Licence

Link: Street Cafe Licence

TA10 – Attachments to Street Lighting Columns

Link: Attachments to Street Lighting Columns

TA11 – List of Streets

Link: List of Streets

TA12 – Materials Storage or Excavation in the Highway

Building materials should not be placed upon the Highway and should be contained within the construction site. Materials storage will only be allowed in exceptional circumstances and then only subject to the prior approval of the Highway Authority who can licence this under Section 171 of the Highways Act 1980.

Prior to placing any materials on the Highway the contractor or individual must obtain a Section 171 licence. All materials must be cleared from the Highway at the termination of the works and the Highway left in a clean and tidy condition.

Where an individual or company that is not a utility company has reason to excavate in the Highway to access apparatus, repair services or place apparatus in the Highway then the County Council may grant a licence under NRSWA 1991.

All storage areas and excavations must be adequately signed and guarded to the requirements of "Safety at Street Works and Road Works: a Code of Practice"

Any damage caused to the footway, carriageway or verge must be made good to the satisfaction of the Highway Authority**.** The applicant may be subject to fines if the conditions of the licence are breached.

Contact Email: Highways.Hub@derbyshire.gov.uk

TA13 – Tourist Signing Policy and Procedure

Author: Michelle Spence
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Public

Agenda Item No. 4(e)

DERBYSHIRE COUNTY COUNCIL

MEETING OF CABINET MEMBER – HIGHWAYS, TRANSPORT AND INFRASTRUCTURE

23 January 2020

Report of the Executive Director – Economy, Transport and Environment

STATEMENTS OF COMMON GROUND – NOTTINGHAMSHIRE COUNTY COUNCIL

(1) **Purpose of Report** To seek the Cabinet Member's approval for Derbyshire County Council to enter into and, be signatories to, Statements of Common Ground (SoCG) with other local authorities/organisations within and outside Derbyshire.

(2) **Information and Analysis** Under Section 33A of the Planning and Compensation Act 2004, local planning authorities are under a duty to cooperate with each other and with other prescribed bodies, when local plans, (including mineral and waste local plans) are being prepared which concern 'strategic matters' that cross administrative boundaries.

The National Planning Policy Framework (NPPF), February 2019, sets out national policy in respect of this duty. Paragraph 25 of the NPPF expects strategic policy-making authorities, including county councils, to collaborate and identify the relevant strategic matters which they need to address in their development plans.

Paragraph 26 of the NPPF emphasises that effective and ongoing joint working in this regard is integral to the production of 'positively prepared and justified development strategies.' In particular, joint working should help to determine where additional infrastructure is necessary and where development needs that cannot be met wholly within a particular area could be met elsewhere.

In order to demonstrate effective and ongoing joint working, Paragraph 27 of the NPPF expects strategic policy-making authorities to prepare and maintain one or more SoCG to document the cross-boundary matters being addressed and progress made in cooperating to address these matters.

National Planning Guidance advises that SoCG should be prepared and maintained throughout the plan-making process. By the time of draft local plan

publication, SoCGs should be available on the websites of each of the responsible local planning authorities to provide transparent documentation that the collaboration has taken place.

Derbyshire County Council is the minerals and waste planning authority for the County (outside the Peak District National Park) and has a statutory duty to prepare minerals and waste local plans, which it is carrying out in collaboration with Derby City Council to provide new, joint minerals and waste local plans. It is therefore required to provide SoCG in respect of these local plans.

Derbyshire County Council is also a statutory consultee on mineral and waste local plans, prepared by other mineral and waste planning authorities, and on general development plans prepared by district and borough councils, both within and adjoining Derbyshire. Therefore, it has a duty to co-operate with these councils on the strategic, cross-boundary matters affecting these plans and is expected similarly to enter into SoCG with the relevant authorities and prescribed parties.

Requests for SoCG, in which the County Council is expected to enter/be signatories to, have been received from the following local authorities/ organisations:

Local authority(s) /organisation(s)	**Title/Nature of Statement of Common Ground**	**Date Received**
Nottinghamshire County Council	Nottinghamshire Minerals Local Plan SoCG (Final Draft)	8 November 2019

Specific details about the draft SoCG, including a summary of the strategic matters proposed to be agreed to as common ground on behalf of Derbyshire County Council and any significant issues on which there appears to be an absence of common ground, are provided in the relevant appendix attached.

The draft SoCG is considered to provide an appropriate acceptance or confirmation of common ground between the County Council and other authorities on matters of strategic planning which affect Derbyshire.

(3) **Financial Considerations** There are no financial considerations associated with this report.

(4) **Legal Considerations** The recommendation in this report is made having full regard to the County Council's responsibilities and services under the provisions of the Localism Act 2011, Planning and Compulsory Purchase Act 2004, Town and Country Planning Act 1990 and National Planning Policy Framework.

(5) **Social Value Considerations** The relevance of social value in terms of social, economic and environmental wellbeing is considered in the preparation of local plans. Meeting the current and future needs of communities and the management of scarce resources (i.e. sustainable development) is central to the role of local and county planning authorities in preparing and implementing their local plans. Where social value considerations are particularly significant in co-operation under the duty to co-operate under Section 33, this can be expected to be reflected in the content of any corresponding SoCG.

Other Considerations

In preparing this report the relevance of the following factors has been considered: prevention of crime and disorder, equality and diversity, human resources, environmental, health, property and transport considerations.

(6) **Key Decision** No.

(7) **Call-In** Is it required that call-in be waived in respect of the decisions proposed in the report? No.

(8) **Background Papers** Held on file within the Planning Service of the Economy, Transport and Environment Department.

(9) **OFFICER'S RECOMMENDATION** That the Cabinet Member gives approval for Derbyshire County Council to enter into a Statement of Common Ground, referred to in the appendix to this report, with Nottinghamshire County Council.

Mike Ashworth
Executive Director – Economy, Transport and Environment

Appendix

Statement of Common Ground – Nottinghamshire County Council

Name of Local Authority(s)/Organisation (s) with whom SoCG is to be signed.	Nottinghamshire County Council
Officer contact:	Michelle Spence, Development Plans Manager

Summary of strategic [cross-boundary] matters proposed to be documented as common ground in the SoCG:

Derbyshire, along with the Peak District, is a major producer of crushed rock for aggregate use and supplies a wide number of markets across the country. Nottinghamshire's crushed rock resource is relatively limited and therefore 30% of its requirements are currently imported from Derbyshire. Derbyshire County Council (including Derby City Council) has confirmed that it has sufficient permitted reserves to enable the continued supply of aggregate crushed rock to Nottinghamshire over the life of the plan to 2036.

Sand and gravel is extracted along the Trent Valley in both Derbyshire and Nottinghamshire and some mineral moves between the two areas. Both authorities are proposing to allocate sites in their Mineral Local Plans, and it has been agreed that this will continue to make adequate provision to maintain the supply of cross border movements of sand and gravel over the Plan period to 2036. Additionally, both authorities have agreed that, wherever practical, they will work together to ensure that landscape scale benefits can be gained from restoring worked out sand and gravel sites close to the Nottinghamshire/Derbyshire border.

Clay reserves at Kirton Clay pit in Nottinghamshire remain adequate to supply demand for clay from the adjacent brick works beyond the plan period to 2036. However, a relatively small but important amount of brick clay is imported from Waingroves clay pit in Derbyshire to the brick works for blending purposes. The pit has sufficient reserves to maintain this supply well beyond the end of the plan period. The authorities have agreed to continue to monitor this cross border movement of mineral.

Industrial dolomitic limestone of suitable specification for making refractory products is a very scarce resource in the UK. No industrial dolomite is currently worked in Nottinghamshire, although potential reserves exist in a small area close to the existing industrial dolomite works just over the County boundary at Whitwell in Derbyshire. The resource area is also located close to Creswell Crags, a Site of Special Scientific Interest (SSSI), Scheduled Monument (SM), and potential World Heritage Site (WHS). Permitted industrial dolomitic reserves in Derbyshire are anticipated to be

worked out in 2033 after which alternative resources will be needed to maintain supply. The authorities have agreed to continue co-operation to ensure that both local plan approaches seek to maintain this supply and take into account any potential new areas of working.

A range of minerals lie on the boundary between the two authorities, including sand and gravel, industrial dolomite and shallow coal reserves. Both authorities have identified resources of these minerals to be safeguarded and agreed to ensure that a consistent and co-ordinated approach is taken to the safeguarding of these minerals in their respective areas.

Shallow coal reserves run along much of the boundary between Nottinghamshire and Derbyshire, although there are no active or proposed surface mines in this area. Similarly, deep lying coal resources do still remain in the Derbyshire-Nottinghamshire coalfield and whilst high investment costs and fluctuating coal prices appear to suggest that proposals for major new colliery development are unlikely there continues to be some potential for such proposals to come forward. Both authorities have agreed to continued co-operation regarding appropriate provision to enable the supply of shallow and deep mined coal.

There are a number of oil and gas bearing mineral resources that straddle the County boundary, along with extant PEDL licences. Oil and gas is worked from conventional sources such as sandstone and limestone, whilst unconventional sources of oil and gas also exist within coal and shale deposits. Both authorities have agreed to continued co-operation regarding appropriate provision to enable the supply of conventional and unconventional hydrocarbons.

Outline of projections/analyses/assessments/policy positions and points of view proposed as common ground under the SoCG which reflect previous authorisations by the Cabinet Member:

None identified.

Outline of other projections/analyses/assessments/policy positions and points of view proposed as common ground under the SoCG by the Cabinet Member:

The main purpose of the SoCG is to identify strategic cross border issues between Nottinghamshire and Derbyshire and to adopt compatible local plan approaches, to ensure an adequate and steady supply of minerals and, for other mineral related issues. Strategic cross border matters have been identified in relation to aggregate crushed rock and sand and gravel; brick clay; industrial dolomitic limestone, shallow and deep mined coal, oil and gas, safeguarding mineral resources and restoring sand and gravel sites in the Trent Valley.

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Public

Agenda Item No. 4(f)

DERBYSHIRE COUNTY COUNCIL

MEETING OF THE CABINET MEMBER – HIGHWAYS, TRANSPORT AND INFRASTRUCTURE

23 January 2020

Report of the Executive Director – Economy, Transport and Environment

REVIEW OF CHARGES FOR COMMERCIAL WASTE

(1) **Purpose of Report** To report on charges proposed to the District/Borough Councils for the disposal of commercial waste in light of the recent changes to waste contracts.

(2) **Information and Analysis** At the meeting on 12 September 2019, the Cabinet Member approved the following waste recharge rates:

- The abandoned vehicle rate for 2019-20.
- The recycling credit rate for 2019-20.
- The excess mileage payment for 2019-20.

It was also resolved that following recent changes to the County Council's long term waste contract, the commercial waste disposal recharge rate proposed for 2019-20 would be reviewed and reported to a future meeting of the Cabinet Member.

Commercial Waste Disposal Recharge Costs
The District and Borough Councils, as Waste Collection Authorities (WCAs), have a statutory duty to collect, on request, commercial waste from a range of organisations, such as businesses, markets, Government offices, etc. They collect around 13,000 tonnes of commercial waste per year, approximately 4% of the total local authority collected municipal waste stream in Derbyshire. WCA costs (including disposal) are recovered from the organisations from which they collect the waste.

The majority of commercial waste in the County is collected and disposed of by private sector waste collection companies. Some commercial waste collected by the WCAs is, however, disposed of by the County Council through its waste management contracts. Up until 2 August 2019, disposal of this commercial waste was undertaken by Resource Recovery Solutions (Derbyshire) Ltd (RRS) under the Council's long term waste management contract. However, following termination of that contract on 2 August 2019

disposal arrangements have been provided by Renewi UK Services Ltd (Renewi) under the Council's Continuity Services Contract.

In accordance with legislation, contract costs for the disposal of commercial waste collected by the WCAs are initially met by the County Council and then recharged to the WCAs.

At a meeting on 26 June 2018, the Cabinet Member approved the commercial waste disposal recharge rate for 2018-19 (Minute No. 68/18 refers). The recharge comprises a gate fee and contractual disposal costs incurred by the County Council, together with an administration fee.

The costs incurred in disposing of waste under the new contract with Renewi have been examined in order to ensure that the Council would not be disadvantaged financially should the charges proposed in the 12 September 2019 report be introduced. This has been determined to be the case.

In light of the above, the following table details the rates charged for in 2018-19 and sets out proposed revised charges for 2019-20:

Commercial Waste Recharge	**2018-19**	**2019-20**
Total per tonne (gate fee + contractual disposal costs)	£130.78	£134.43
Annual administration fee	£1,265	£1,289

The commercial waste disposal recharge costs will, by necessity, require a full review once the current continuity services arrangements come to an end.

Cabinet Member approval for the new annual rates has historically been requested each year but, in line with the proposals in the 12 September 2019 report, it is proposed that, in future, approval will be sought on a bi-annual basis with the next 2020-21 rates implemented without submitting a report. It is anticipated that this will greatly reduce the time taken to process WCA recharges and receive their payments, particularly at the start of the year. This timescale will also broadly coincide with the current timetable for the Continuity Service Contract.

(3) **Financial Considerations** It is proposed that the commercial waste disposal recharge rate for 2019-20 is set at £134.43 per tonne, with an annual administration fee to each WCA of £1,289.

The proposed commercial waste recharges will ensure that all commercial waste disposal costs are recovered from the WCAs.

Other Considerations

In preparing this report the relevance of the following factors has been considered: legal, prevention of crime and disorder, equality and diversity, human resources, environmental, health, property, social value and transport considerations.

(4) **Key Decision** No.

(5) **Call-In** Is it required that call-in be waived in respect of the decisions proposed in the report? No.

(6) **Background Papers** Held on file within the Economy, Transport and Environment Department.

(7) **OFFICER'S RECOMMENDATIONS** That the Cabinet Member approves:

7.1 The commercial waste disposal recharge rate for 2019-20 at £134.43 per tonne plus an annual administration charge to each Waste Collection Authority of £1,289.

7.2 The submission of Cabinet Member reports requesting approval for proposed new annual commercial waste disposal recharges be undertaken on a bi-annual basis from 2019-20 onwards, to align with the approvals taken at the 12 September 2019 Cabinet Member meeting.

Mike Ashworth
Executive Director – Economy, Transport and Environment

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Agenda Item No. 4(g)

DERBYSHIRE COUNTY COUNCIL

MEETING FOR CABINET MEMBER FOR HIGHWAYS, TRANSPORT AND INFRASTRUCTURE

23 January 2020

Report of the Executive Director – Economy, Transport and Environment

TO NOTE THE URGENT DECISION TAKEN BY THE EXECUTIVE DIRECTOR – ECONOMY, TRANSPORT AND ENVIRONMENT TO ACCEPT THE RURAL DEVELOPMENT PROGRAMME FOR ENGLAND GRANT AWARD

(1) **Purpose of Report** To note the urgent decision taken by the Executive Director - Economy, Transport and Environment to accept the Rural Development Programme for England (RDPE) grant offer of £403,977 to deliver the Visit. Sleep. Cycle. Repeat (VSCR) Cycling Trails Programme before the grant offer expiration date.

(2) **Information and Analysis** In 2018, VSCR produced a Destination Plan to support the development of the local visitor economy in the north-east of the County. The Plan identified the need to develop a coherent visitor proposition, to promote cycling alongside world-class heritage and attract more visitors in order to grow the overnight-stay market.

An RDPE Expression of Interest (EOI) bid to deliver the VSCR Cycling Trails Programme within the Parish of Pleasley was submitted by the County Council at the end of May 2018. This EOI was successful and a full application was submitted in September 2019. The bid was to support the initial delivery phase of VSCR by creating 5.7km of new and improved cycling infrastructure, as part of the ongoing development of the Key Cycle and Local Cycle Networks within the locality.

In a letter dated 29 November 2019, the Council was offered a grant of £403,977 by the RDPE to deliver the initial phase of the VSCR Cycling Trails Programme.

This offer expired on 10 January 2020, before the next available Cabinet Member meeting.

Under the Council's Constitution, Executive Directors have the power to take such actions to safeguard the interests of the Council if the timescales do not

allow for the matter to be dealt with by the next available meeting of the Council, Cabinet or Cabinet Member.

Due to the grant offer expiration date, an urgent decision was taken by the Executive Director - Economy, Transport and Environment to accept the RDPE grant on behalf of the County Council.

(3) **Financial Considerations** The RDPE grant is for 100% of the costs associated with the capital phase of the Programme. Table 1 outlines the total grant offer, below.

Table 1 - A summary of the RDPE Grant Offer

Item	**Grant Offer**	**Comment**
Cycling Trails Programme capital build costs	£373,737	Based on prices derived from tender CETE059
Third-party engineering services costs	£30,240	Based on prices obtained through written quotation
Total	**£403,977**	

It is estimated that a further £37,900 of costs is required to conclude landowner, rights of ways and legal work, and provide technical engineering compliance. These are outside the scope of the RDPE grant and would be met through an existing Local Transport Plan allocation.

The Council is already liable for the maintenance of 92% of the routes. The RDPE grant is likely to reduce the cost of future capital maintenance for at least 10 to 15 years, the cost of which is estimated to be in the region of £80,000 at today's prices.

The Council has a duty under its public liability responsibilities to maintain these routes, however, as more people use them, the cost of revenue maintenance is likely to increase. It is estimated that future revenue maintenance costs would be in the region of £1,000 per kilometre per year at today's prices, so an estimated £6,000 per year. This would be met through existing Rights of Way budget, supported by partners and volunteers engaged with VSCR and the maintenance of the Archaeological Way.

(4) **Legal Considerations** The Council's Constitution provides that "*notwithstanding any other provision of the Constitution Executive Directors shall have the power, after discussion, if practicable, with the Leader of the Council or the relevant Cabinet Member or Chair, to take such actions deemed to be necessary and expedient in matters requiring urgent consideration and which, because of the timescale involved, or the need to*

safeguard the interests of the County Council, cannot be dealt by submission to the next meeting of the Council, Cabinet, Cabinet Member or Committee". Approval for acceptance of the grant was sought by way of urgent decision in order to meet with the timescales of the grant offer.

Other Considerations

In preparing this report the relevance of the following factors has been considered: prevention of crime and disorder, equality and diversity, human resources, environmental, health, property, social value and transport considerations.

(5) **Background Papers** Held on file within the Economy, Transport and Environment Department.

(6) **Key Decision** No.

(7) **Call-In** Is it required that call-in be waived in respect of the decisions proposed in the report? No.

(8) **OFFICER'S RECOMMENDATIONS** That the Cabinet Member notes the urgent decision taken by the Executive Director – Economy, Transport and Environment, in accordance with the Council's Constitution, to accept the Rural Development Programme for England (RDPE) grant offer of £403,977 to deliver the Visit. Sleep. Cycle. Repeat (VSCR) Cycling Trails Programme, as detailed in this report.

Mike Ashworth
Executive Director – Economy, Transport and Environment

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Public

Agenda Item No.5

DERBYSHIRE COUNTY COUNCIL

MEETING OF CABINET MEMBER – HIGHWAYS, TRANSPORT AND INFRASTRUCTURE

23 January 2020

Joint Report of the Executive Director - Economy, Transport and Environment Department and the Director of Finance & ICT

BUDGET MONITORING 2019-20 – PERIOD 7

(1) **Purpose of Report** To provide the Cabinet Member with an update of the Revenue Budget position for 2019-20 up to the end of 31 October 2019 - Period 7.

(2) **Information and Analysis**

Forecast Summary
The net controllable budget for the Highways, Transport and Infrastructure portfolio is £77.843m.

The Revenue Budget Monitoring Statement prepared at Period 7 indicates that there is a projected year-end overspend of £1.215m.

The portfolio incurred additional costs of almost £0.547m due to the Toddbrook Reservoir Whaley Bridge incident which has been funded from General Reserve. The rest of the overspend will be supported by the use of £2.000m of Budget Management Earmarked Reserve, as agreed in the Revenue Budget report 2019-20, which was reported to Council on 6 February 2019 (Minute No.12/19 refers). Use of this reserve has enabled the Highways Maintenance budget to remain at the same level as the previous financial year. After the use of this reserve, the forecast is an underspend of £0.785m.

The areas which make up this projection are shown in the table below:

	Controllable Budget £m	Projected Actuals £m	Forecast Over/ (Under) Spend £m
Waste Management	44.081	42.434	(1.647)
Public and Community Transport	14.743	14.593	(0.150)
Highways Maintenance	14.012	12.143	(1.869)
Winter Maintenance	1.473	3.250	1.777

Highway Management and Land Reclamation	2.232	2.461	0.229
Road Safety	0.176	0.430	0.254
Resources and Improvement	2.376	2.143	(0.233)
Countryside Services	2.445	2.429	(0.016)
Council Fleet Services	(0.662)	(1.017)	(0.355)
Planning and Development	0.649	(1.129)	(1.778)
Flood Risk Management	0.454	0.305	(0.149)
Digital Derbyshire	0.182	0.145	(0.037)
Management Team	0.603	0.563	(0.040)
Pension Back Funding	0.329	0.308	(0.021)
Unallocated Savings	(5.250)	0.000	5.250
Total	**77.843**	**79.058**	**1.215**
Use of Budget Management Earmarked Reserve	2.000	0.000	(2.000)
Total After Use of Reserves	**79.843**	**79.058**	**(0.785)**

Key Variances
Waste Management underspend £1.647m
The underspend is due to lower waste tonnages than originally forecast and additional savings under the new service continuity arrangements.

Highway Maintenance underspend £1.869m.
Some of the underspend is due to salaries being allocated to capital budgets, as opposed to revenue, and vacancies. Posts in the new Highways Structure are currently being filled which will reduce the underspend.

A total of £0.547m of the £0.567m cost incurred in the Toddbrook Reservoir Whaley Bridge incident, which has been funded from General Reserve, relates mainly to Highway Maintenance budgets.

Winter Maintenance overspend £1.777m.
The budget for winter maintenance is £1.473m. At period 7, £1.189m of this had been spent. The forecast for the year is £3.250m giving a projected overspend of £1.777m.

Much of the cost for an average winter is paid for in advance of any severe weather. Grit salt is a large part of this and the Council has to build up a stock that complies with Department of Transport recommendations, for the amount expected to hold prior to the onset of winter. Fleet is the other major cost with the gritting and associated vehicles being paid for at the beginning of the financial year.

The Winter Service budget does not provide for more than a mild winter so, in years where winters are more severe, it is reliant on funding these additional service costs from contingency reserves.

Planning and Development underspend £1.778m.
An increase in sections 38 and 278 (Highways Act 1980) agreements income are the main contributors to this underspend.

Budget Savings
Budget reductions totalling £2.609m were allocated for the year. Further reductions allocated in prior years, totalling £3.321m, had not been achieved and were brought forward to the current year. This has resulted in total reductions to be achieved of £5.930m at the start of the year.

The value of the savings initiatives, which have been identified for implementation in the current year, is £0.680m. In addition, there are £0.494m of savings initiatives identified in the previous year which have not been achieved at the start of the year, but are still expected to be achieved within the year.

The shortfall between the total reductions expected to be achieved and the identified savings initiatives at the start of the year is £5.250m, shown in the table above as 'Unallocated Savings'.

It is forecast that £0.680m of savings will have been achieved by the year-end.

The table below shows performance against the target.

Identified Savings Initiatives	**Budget Reduction Amount £m**	**Forecast to be Achieved by the end of 2019-20 £m**	**(Shortfall)/ Additional Savings Achieved £m**
Gold Card	0.250	0.250	0.000
Safe and Active Travel	0.240	0.240	0.000
Countryside	0.100	0.100	0.000
Parking management	0.090	0.090	0.000
Total of Identified Savings Initiatives	**0.680**	**0.680**	**0.000**
Shortfall/(Surplus) of Identified Savings	5.250	0.000	5.250
Total Savings Target	**5.930**	**0.680**	**5.250**

Budget Reductions	**£m**
Prior Year B/f	3.321
Current Year	2.609
Total Savings Target	**5.930**

Growth Items and One-Off Funding
The portfolio received the following additional budget allocations in 2019-20:

Waste Treatment and Disposal - £1.500m ongoing.
Increases in the cost of delivering the main waste treatment and disposal contracts across Derbyshire, and the increased cost of recycling credits.

Highways Maintenance - £1.000m one-off.
To provide a co-ordinated, cyclical maintenance programme and maintenance improvements.

Public Transport - £0.500m ongoing.
To enable reasonable levels of public transport accessibility to be maintained across Derbyshire.

Water Body - £0.100m one-off.
Changes to regulations have given rise to additional project management responsibilities, in respect of the Council's obligations to managing its water bodies.

HS2 Co-ordination Officer - £0.064m one-off.
To provide support in representing the Council's interest as the HS2 route is developed.

Street Lighting - £0.048m one-off.
To meet the inflationary costs of street lighting energy.

Risks
There is a risk that the following issues could negatively impact on the portfolio's forecast outturn position reported in the Forecast Summary above:

Service	**Risk**	**Sensitivity £m**	**Likelihood (1 = Low, 5 = High)**
Department General	Failure of assets including roads, pavements, bridges, retaining walls, street lighting columns, safety fencing, gullies, countryside assets, canals, reservoirs etc.	1.500	4
Winter Maintenance	Impact of a severe winter	1.500	4
Street Lighting Energy and Maintenance	Further energy price increases, or further slippage in implementation of the LED programme	0.300	2

Flooding and/or extreme weather	Emergency response procedures are in place to minimise the impacts of these emergencies, however have to deal with retrospectively.	1.000	3
Waste Management	Uncertainty in the future of the Waste Treatment Plant	3.000	5

Earmarked Reserves
Earmarked reserves totalling £16.805m are currently held to support future expenditure. Details of these reserves are as follows:

Reserve Description	**Amount £m**
Grants	1.369
Committed Liabilities – Revenue	0.603
Committed Liabilities – Capital	1.085
Winter Maintenance	2.000
Money Held on Behalf of Other Councils and Partnerships	0.301
Renewal Funds regarding Laboratory and Fleet Equipment	0.056
Waste Recycling Initiatives	0.598
Derby and Derbyshire Road Safety Partnership	0.202
ETE Underspend Reserve (committed to specific projects)	2.282
ETE Underspend Reserve (to assist with managing the departments savings programme)	8.309
Total Earmarked Reserves	**16.805**

Debt Position
The profile of the debt raised, relating to income receivable by services within the Economy, Transport and Environment Department is as follows:

0 – 30 Days £m	**31 – 365 Days £m**	**1 – 2 Years £m**	**2 – 3 Years £m**	**3 – 4 Years £m**	**Over 4 Years £m**	**Total £m**
1.521	3.795	0.447	0.045	0.017	0.013	5.838
26.05%	65.01%	7.66%	0.77%	0.29%	0.22%	100%

In the year up to the end of 31 October 2019, the value of debt that has been written off totals £0.014m.

(3) **Financial Considerations** As detailed in the report.

Other Considerations

In preparing this report the relevance of the following factors has been considered: legal, prevention of crime and disorder, equality and diversity,

human resources, environmental, health, property, social value and transport considerations.

(4) **Key Decision** No.

(5) **Call-In** Is it required that call-in be waived in respect of decisions proposed in the report? No.

(6) **Background Papers** Held on file within the Economy, Transport and Environment Department.

(7) **OFFICER'S RECOMMENDATION** That the Cabinet Member notes the report.

Mike Ashworth **Executive Director – Economy, Transport and Environment**	**Peter Handford** **Director of Finance & ICT**