

SUBJECT:	MAINTENANCE OF HIGHWAYS – MOTION TO REVIEW POTHOLE REPAIR TECHNIQUES
MEETING:	FULL COUNCIL
DATE:	24th SEPTEMBER 2026
DIVISION/WARDS AFFECTED:	ALL

1. PURPOSE:

- 1.1 To report back to Council on the work undertaken to address the highways reactive maintenance motion agreed by Council on 5th March 2026. The motion called for a review of alternative methods of road repairs; a full cost analysis; action plan and production of performance data.

2. RECOMMENDATIONS:

- 2.1 To agree to allocate resources to fund the creation of two additional highways inspector posts.
- 2.2 To consider the allocation of additional revenue funding through the 27/28 budget setting cycle, to secure the long-term position of the two additional pothole teams.
- 2.3 To agree the adoption of the Bobcat Skid Steer as the preferred delivery mechanism for planned maintenance.
- 2.4 To agree the acquisition of a Bobcat Skid Steer.
- 2.5 To agree the reporting and communication methodology as set out in the report.
- 2.6 To agree to direct all reporting of potholes and other highways issues through My Council Services (My Monmouthshire) to improve data collection and reporting capability.
- 2.7 To undertake a review of reactive highways maintenance in 24 months to assess the effectiveness of the agreed changes implemented following this review.

3. KEY ISSUES:

- 3.1 To ensure cross-party engagement in responding to the issues raised in the motion, a cross-party member reference group was established to consider the existing practice and alternative equipment and methodology that could be deployed.

3.2 Work had previously been initiated to consider how to improve communications and the availability of information for members and the public alike, however, to accelerate this work to coincide with the motion response, a cross-directorate officer working group was implemented to consider the following work packages:

- Service delivery model
- Digital solutions
- Data and performance indicators
- Communications

3.3 The combined outputs of the member and officer working groups have enabled the development of a comprehensive suite of improvements including reporting and communication methods, the proposed implementation of an end-to-end digital process for the reporting and resolution of potholes; improved data collection and therefore performance reporting and improved outcomes for highways users. A summary of the workstreams and their outputs is provided below, and further details can be found in the accompanying appendices.

Context

3.4 During 2025/26, 4,300 service requests were received by Highways Operations, which was an increase of 46% on the previous year. The cost of making safe through a combination of cold lay and hot poling works was £494,000, broken down as follows:

	£000s
Labour – 4 operatives	200
Material – Hot Lay (1,356t)	136
Material – Cold Lay (452t)	51
Plant & Machinery	89
Disposal & other sundries	18
Total	494

3.5 Reactive pothole repairs are undertaken through either cold lay deferred set material that is stored at the highways depots for reactive make safe work or hot tarmac material for “hot Potholing” that is collected from the dispatching plant daily and is therefore more planned in its delivery. These repairs are intended to make the highway safe until such time a planned intervention of patching, surface dressing or re-surfacing is undertaken. Patching is different from the cold and hot fill methods as it is used in a planned way to provide a permanent repair on a road that has structurally failed and needs partial replacement. Further information on existing methods can be found in Appendix 2.

Workstream 1: Alternative Technologies

3.6 Trials were established to test alternative equipment within a Monmouthshire context. The member reference group were invited to see the technology in action and officers have continued to assess the durability of the different methods to determine their effectiveness.

Reactive cold fill methods

3.7 The trials considered the opportunity to improve the existing cold fill material which is deployed to fill potholes which are considered to pose a risk to safety and therefore require an immediate response. The existing practice is for crews to use tarmac which is hand filled and tampered down. This can lead to the solution standing proud and is prone to degradation in highly trafficked areas or poor weather conditions.

3.8 To improve the resilience of this method we have been trialling Viafix as a substitute for reactive repairs. The cost of the fill material is four times the cost of tarmac, however the product is water activated and self-compacting which makes it a more resilient product in winter and wet weather conditions.

3.9 As the Viafix method results in improved durability, creates a smoother surface and reduces the need for repeat visits, it is proposed that the existing cold fill method continues to be deployed during the summer months and the Viafix solution is deployed during the winter months. The cost per m² is approximately £50 - £80 laid.

Cost comparison over a 16-week period

	Viafix Cold Lay	Tarmac	Variance	
Price Per Ton	450	105	345	Viafix is delivered to site whereas we need to collect tarmac from dispatch plant. We will see a saving in travelling time.
Est Number of tonnes used (over 16 week winter period)	160	160	-	
Total Cost	72,000	16,800	55,200	

Hot Fill Alternative Technology Trials

3.9 A number of trials were arranged which included spray injection patching, elestomac sealing and mobile planing. Further information on the trials is available in Appendix 3. In summary, the spray injection system worked well in rural locations, can address all defect sizes, achieves a 65% reduction in carbon emissions compared to standard patching and produces a good finish. However, the method is not suitable for high stress locations and is restricted by weather conditions.

3.10 The elestomac sealing solution seals the surface of filled potholes, providing a smooth finish and extending the life of reinstatements. As it uses recycled material it has a lower environmental impact. It is not proposed that this method is taken forward as the solution is weather dependent, does not fill potholes and material costs are high.

3.11 The planing method¹ was trialled using the JCB Pothole Pro and the smaller Bobcat Skid Steer. The planing equipment prepares the pothole for filling by cutting, cropping and cleaning the void. The reinstatement is undertaken by hand with following crews. This solution was the most effective trial achieving high output; however, this is constrained by the resource capacity of the crews filling the holes and the cost of the fill. The solution is

¹ Planing involves removing the defective road surface and then clearing the debris from the hole so that it can be filled.

not suitable for reactive responses as the work must be planned to ensure that there are adequate resources to complete the works and any necessary traffic management is in place. Both the Pothole Pro and the Skid Steer have additional attachments that improves the utilisation of the equipment. The Pothole Pro has a higher capital cost than the Skid Steer and needs to be driven to site, the Skid Steer is compact, more affordable and can be trailed to site. Given the rural nature of the County, the Skid Steer is the preferred technology from an operational perspective. A comparison of the costs is provided in the table below.

3.12 The Highways Service has rightly been challenged about the recommendation to only purchase one Skid Steer. Resources are currently being deployed to deal with the existing backlog of reported potholes using the cold fill method. Whilst we are keen to transition to a more planned approach using the Skid Steer, the current backlog needs to be resolved first, and the cold fill approach is the quickest method of achieving that. This position will be reviewed early in the new financial year and if the position has stabilised, and the Skid Steer has been as effective as we expect, a further a Skid Steer will be acquired.

3.13 Following a consideration of the trials, the recommendation is;

- That Highways Operations continue to make safe high-priority defects on a reactive basis using a combination of hot and cold lay materials.
- Viafix will be the preferred fill method in wet and cold conditions due to its durability and longevity.
- Permanent, planned reinstatements are undertaken using the Bobcat Skid Steer with planer attachment.

	Bobcat £000's	Pothole Pro £000's	Variance £000's	Notes
Up-front Cost	60	215	155	
Annual Running Costs				
Annual Borrowing Cost (over 10 years)	6.5	23	16.5	
Operatives	200	250	50	Bobcat requires 4 operatives, Pothole Pro requires 5 operatives
Material 5t per day for 226 days	113	113	0	
2 vehicles (hot box and flat bed)	40	40	0	
TM and Plant	30	35	5	
Disposal	35	35	0	
Fuel	12	15	3	
Total	436.5	511	74.5	

Workstream 2 - Digital

3.14 This workstream has considered the existing end to end operating model and the opportunities to improve it through digitisation and the My Council Services reporting module. A review of the current operating model identified that reports generated through My Monmouthshire were being referred directly to Highways Operations without any categorisation or review due to a lack of Inspector capacity. At the point that the reports

were transferred to Highways Operations the digital process ceased and job sheets and reporting back on progress and completion of the job was undertaken using hard copies. This is in part due to the lack of a consistent software solution between Highways Asset Management and Operations which prevents the sharing of electronic data and activities. The consequence of this is that works were undertaken based on the allocation of duties to teams rather than a prioritised basis and reporting back through My Monmouthshire was inconsistent and inaccurate as it relied on the supervisor returning to the depot to update the system. This was not always consistently undertaken resulting in delays in reporting and the failure to close jobs.

- 3.15 To address this and improve communication flows, six tablets have been acquired to digitise the Highways Operations process. Supervisors are using this to report on progress of My Council Services reports and take photographs of completed works whilst on site. With the support of SRS, the Causeway software has been acquired which will be rolled out over the autumn and will be the common platform for Highways teams. As well as improved reporting and communications it will also result in improved data, which will be used to populate new performance indicators.
- 3.16 The digital team also considered the existing reporting format for pothole reporting through My Council Services. The review identified that data quality was poor as there was limited opportunity to identify the precise location of the pothole, the underlying GIS solution was not consistently attributing pothole reports to the correct location, there was no mechanism to identify repeat reports and the form did not allow for the collection of all the information required by Highways Operations.
- 3.17 Colleagues from Infrastructure, SRS, Policy & Performance, Communications and Data have developed a new form and improved the functionality of the application through the acquisition of What Three Words and parish and ward data capabilities. This is currently being trialled and when the final amendments have been completed will be rolled out, alongside a how-to video produced by the Communications team. Improved functionality includes the ability for members of the public to reference a pot hole through What Three Words, placing a pin on a map or adding an address, they can also upload photographs and are made aware if the pot hole has already been reported. If the latter applies, they can elect to be notified of progress without placing a duplicate report.
- 3.18 The end-to-end flow of data has been reviewed and documented to ensure that information captured through pothole reports from initial customer submission meets what is required to support both the operational response, preventative maintenance planning and performance reporting.

Workstream 3 – Data & Performance Indicators

- 3.19 The changes that we are implementing to improve the collection, and reporting mechanism will improve the integrity of the data and enable us to generate performance statistics with a higher confidence level. The proposed indicators are as follows:

How Much

- Number of pothole reports received
- Number of potholes
- Number of potholes repaired

How Well

- Percentage of potholes repaired in target time

What difference has this made

- Percentage of roads in good, average and poor condition

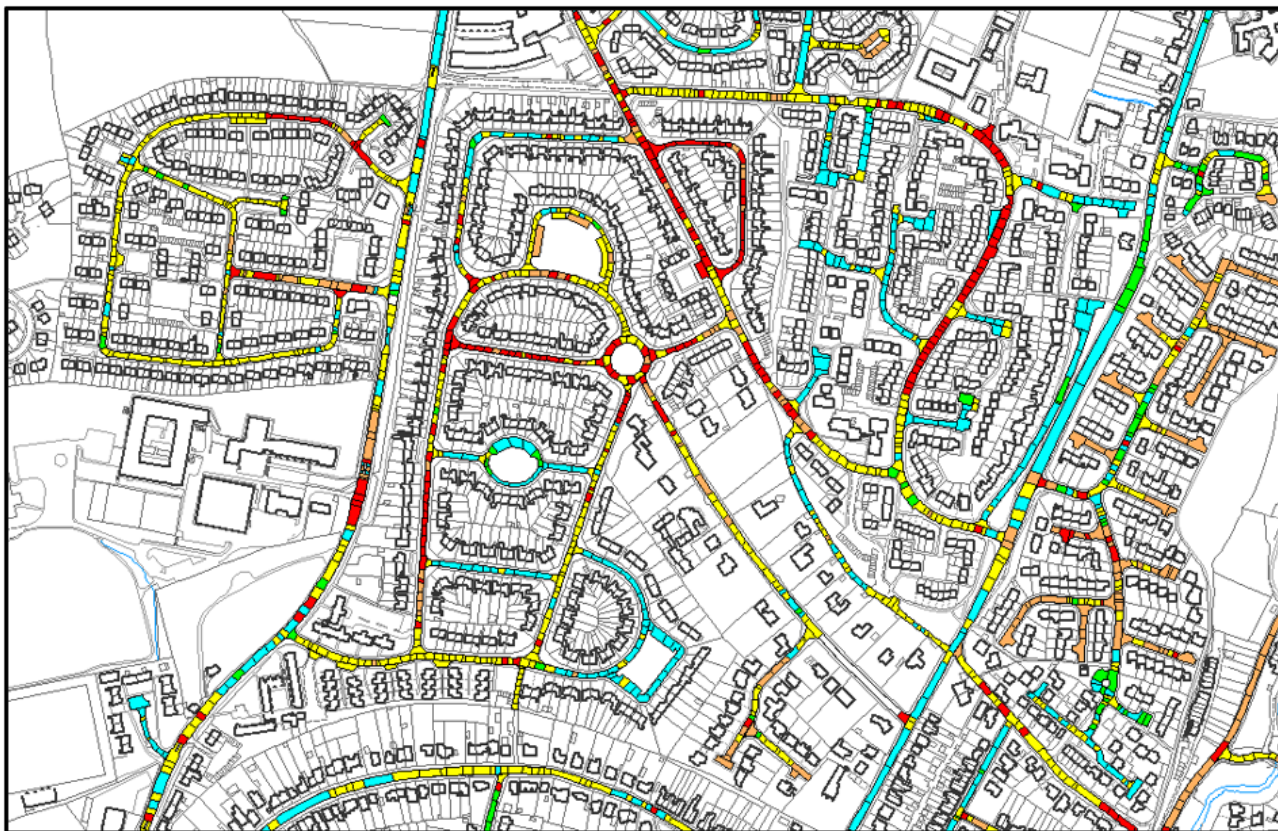
Highway Maintenance

- Total spend on highways maintenance programme
- The length of road repaired through highways maintenance programme
- The number of potholes repaired through highways maintenance programme
- The number of potholes prevented through highways maintenance programme

- 3.20 Not all of the proposed indicators will be available immediately but will be rolled out in 27/28 following the implementation of Causeway.
- 3.21 In addition to the above we are intending to increase the availability of highways data. The annual (plus 2nd year indicative) forward work programme will be advertised on the website and whilst this does not achieve the expectation of programming all requests it will give members and residents a transparent view of the priorities identified for the next 24 months.
- 3.22 The list of schemes would be published at start of the financial year with a caveat that the programme is fluid and subject to change due to factors such as funding constraints, third party highway works, and the introduction of unplanned urgent works.
- 3.23 We periodically commission a large-scale condition survey of our highways network, known as a GAIST survey. This provides us with a baseline dataset of the condition of our highway at the point in time the survey is completed using Red, Amber and Green categories. This dataset contributes to our highway maintenance planning. It is used alongside a range of other factors such as road classification, level of traffic and services accessed via the road etc to prioritise planned investment. We are exploring the potential of making the more detailed findings of the survey available to members through our mapping tools.
- 3.24 We will use the survey as base data and produce an annual update to assess the improvement in the highway condition as a result of investment in the network. This will be reported to residents through the network condition performance indicators percentage of roads in good, average and poor condition. Whilst capital investment will result in improvements to the network where they are undertaken, roads and footways where no improvements have been undertaken will not remain static and their condition

will continue to deteriorate. Funding dependant, we will repeat the full survey every few years to understand condition changes across the whole network.

Extract of the GAIST Condition Data



- 3.25 This information will provide members and public alike with increased access to data that has not been previously available and evidences the scale of the challenge to maintain our highways infrastructure.

Workstream 4 - Operating Model Review

- 3.26 The combination of the above workstreams has enabled a review of the existing practices and resources required to deliver the intended improvements and operating efficiencies arising from the study. Whilst the majority can be delivered through the implementation of digital solutions and changing work practices, there are some aspects that would benefit from additional resources to achieve the desired outcomes.
- 3.27 As outlined above, the existing practice is to allocate the pothole reports directly to Highways Operations without any prioritisation by the Assets team. To address this, the review concluded that the service would benefit from increased capacity through the creation of two additional Inspector roles. Because of previous budget savings, there are currently two filled Inspector roles and a third remains vacant. One of the two occupied roles is filled on a job share basis by two of the Highways operational staff for 10 months of the year. This enables the completion of scheduled inspections and retains winter

maintenance resource capacity in Highways Operations as well as providing them with an income stream to offset their income generation target. Conversely this has reduced capacity in the Asset Management team leaving no resources to undertake the inspection or categorisation of reported pot holes.

- 3.28 The increase in wet weather events is accelerating the deterioration of the network increasing reporting demands. To ensure that the urgent and or dangerous potholes are remedied appropriately, a prioritisation regime should be implemented. This will require the creation of two additional Inspector posts to ensure that we continue to undertake scheduled inspections alongside ad hoc service requests. It is acknowledged that this proposal creates an additional unbudgeted revenue pressure, and it is therefore recommended that this is considered as part of the 27/28 budget development.
- 3.29 In 2026/27 council agreed a £2million capital investment to be split over the next three years (£667k a year) to focus on pot holes, patching and small scheme work. This complimented an additional £1,000,000 small scheme funding provided for 3 years from 2024/25 that ends this financial year. This £1m funding was split over 3 years and utilised to repair the small sites that fall between potholes and full resurfacing and generally require between thirty to hundred tonnes of tarmac. Approximately sixty sites across the County were completed as part of this programme.
- 3.30 The new £667k provides six additional operational staff plus approximately £367k for tarmac and equipment. It is anticipated that once the teams have reduced the backlog the focus will move from temporary repairs to patching and, if practical, small schemes.
- 3.31 Maintaining this level of funding will be critical to improving highways maintenance, service request and inspector categorisation response times. While the large injection of LGBI funding was welcomed the “feast and famine approach” to funding is not beneficial in the long term. When it is possible to provide consistent core funding, planned programmes can be developed giving the public confidence in the data provided.
- 3.32 This report recognises the budget challenges the Council faces, but without additional core funding the condition of the highway network will continue to deteriorate. The motion calls for a revised pro-active plan for road maintenance, achieving this will need consistent year on year investment from Welsh Government or the Council.

Workstream 5 - Communications

- 3.33 It is acknowledged that the need for improved communication continues to be a key theme for members and the wider public alike. The workstream considered how to improve information flows for planned maintenance works, reactive events and the publication of performance updates through a data dashboard.
- 3.34 Steps have already been taken to improve the notification of re-surfacing programmes and was recently implemented at Little Mill. This included earlier engagement of the resurfacing works with members and residents; longer consultation lead in times to

respond to feedback and where possible consider mitigations to specific disruptions and the display of warning signs including digital VMS signage. We recognise that all highway works create inconvenience, but by engaging earlier and publishing the forward programme it gives residents and other road users more time to plan. These interventions worked particularly well during the resurfacing works in Little Mill and are being implemented for the next scheme in Frogmore Street.

- 3.35 The Causeway platform allows the integration of My Council Service requests enabling a seamless update for the request originator. Further development of this integrated approach should provide real-time data on service requests, anticipated timelines for repairs and the publication of dashboard data on the Councils website. This robust data capture and record keeping process will strengthen audit trails and provide MCC with meaningful, evidence-based data that can be utilised to identify trends, drive continuous improvement and support future strategic planning.
- 3.36 Improvements to data quality will also enable better reporting capabilities. The council's corporate data tools, dashboards and maps are being utilised to create views of the data. To increase transparency and help to keep members informed about performance within their wards, a member's dashboard is currently in development, which will provide a ward-level view.
- 3.37 The review and update of a dedicated website to host key information has progressed because of the review including the development of key messages, frequently asked questions and social media content. A particular focus has been placed on helping residents understand how potholes are inspected, prioritised and repaired, managing expectations around timescales and encouraging the use of digital reporting channels to improve data quality and performance monitoring.
- 3.38 This coordinated approach aims to improve public confidence, provide greater visibility of service performance, and ensure communities are better informed about both ongoing maintenance activity and the council's longer-term plans to improve the condition and resilience of Monmouthshire's highway network.
- 3.39 Whilst only service requests submitted through MyCouncil Services are actioned by Highways Operations, it is worth noting that there are other platforms which enable residents to report issues such as FixMyStreet, Facebook, Street Repairs etc which are not monitored by the Council. An outcome of the review is the need to promote My Council Services as the preferred way to report issues and to be clear that no other reporting mechanisms are supported. It is essential that members and residents alike use this channel to report issues so that we can develop a single data source which can be used for both reporting and performance management.
- 3.39 As evidenced above, cross-directorate collaboration has been able to identify opportunities to improve existing practice both for residents and the Highways service, some of which are already being deployed. Further improvements will be dependent on additional funding

to acquire new equipment and to support increased capacity within the service which are discussed in more detail in the Resources Section of this report.

4 REASONS:

- 4.1 It is widely accepted that the highways network across the UK needs substantial investment. Under investment and challenging budgets over the last 20 years coupled with increased storm damage over the last 7 years have increased maintenance backlogs and are reflected in the public perception of a failing road system.
- 4.2 The Department for Transport (DfT) previously commissioned the Association of Directors of Environment, Economy, Planning and Transport (ADEPT) to review the current state of the highway network. The [ADEPT & DfT Potholes - a repair guide March 2019.pdf](#) which concluded that “ Potholes mainly form in the winter due to freeze thaw/cycles at a time when highway maintenance departments are focussed on winter maintenance duties. Water, traffic and aging roads contribute to deterioration. Long-term asset management and a risk-based approach is recommended. Repair choices depend on defect size, location traffic and safety and should focus on permanent solutions where possible. Prevention through surface treatments and drainage is vital but limited by funding challenges”.
- 4.3 The situation has continued to deteriorate as costs have continued to escalate and highways budgets have shrunk in real terms both at a national and local level. The local context has seen a reduction in depots and staffing levels and reduced resources for reactive maintenance. The Highways Operations Service is partly funded through the generation of £1.8m of income which is achieved through the completion of small schemes funded by the capital programme. This results in resources being diverted to the completion of scheduled maintenance which limits capacity to undertake reactive repairs. The recent three-year additional funding to support two new reactive teams has reduced this pressure, albeit on a temporary basis.
- 4.4 Additional funding for highways has been provided through capitalisation programmes and as core revenue in 2026. The additional funding is often time limited and requires specific works to be addressed e.g. Additional sweeping capacity, small schemes etc. This funding has been crucial over the last 5 years, but long-term improvement requires long term and consistent investment
- 4.5 Whilst the purpose of the motion is to consider reactive repairs, these must be seen in the wider context that further investment is required to undertake permanent repairs such as surface dressing and resurfacing. Given the scale of the investment required, this is best placed to be addressed at both a national and regional context.

5 RESOURCE IMPLICATIONS:

- 5.1 The review recommends the creation of two additional Highways Inspector posts to provide the capacity required to inspect, categorise and prioritise reported highway defects

alongside the Council's scheduled inspection programme. The estimated full-year recurring cost of the two posts is £100,000 per annum, subject to the outcome of the job evaluation and recruitment processes. It is proposed that recruitment commences immediately. Given the anticipated recruitment timescales, the part-year cost in 2026/27 is expected to be no more than £25,000 and will be managed from within existing Infrastructure budgets. This does not represent a permanent funding solution.

- 5.2 The full-year recurring cost of the additional Inspector posts will therefore need to be considered through the 2027/28 budget-setting process, as part of the Infrastructure portfolio's overall package of budget proposals and alongside the Council's other financial pressures and priorities. Approval of the posts through this report does not confirm the source of permanent funding from 2027/28. The Infrastructure budget proposal will need to set out the recurring funding requirement, any available mitigating savings or income, and the implications should permanent funding not be agreed.
- 5.3 The Council has also provided three-year funding for two additional pothole teams. Continuation of these teams beyond the existing funding period would create a further recurring budget requirement, including associated staffing, vehicle, plant and material costs. The future of the teams will therefore be considered as part of the 2027/28 budget-setting process, informed by service demand, delivery performance, the reduction achieved in the existing backlog and the extent to which activity can move from temporary reactive repairs towards planned and more permanent interventions. No commitment to funding the teams beyond the existing approved period is made through this report.
- 5.4 The proposed use of Viafix during wet and cold conditions is estimated to increase material costs by approximately £56,000, reflecting its higher unit cost compared with the Council's existing cold-lay material. The trials indicate that the product should provide a more durable repair and reduce the requirement for repeat visits, but the resulting operational savings have not yet been quantified. Usage, repair durability, repeat visits and overall cost effectiveness will therefore be monitored following implementation, with the financial impact reported through the Council's established budget monitoring arrangements.
- 5.5 The acquisition of one Bobcat Skid Steer, at an estimated capital cost of £60,000, can be met from existing approved highways capital funding. Any proposal to acquire a second machine in 2027/28 will be subject to evidence from the operation of the first machine, confirmation that sufficient workforce and supporting resources are available to utilise it effectively, a proportionate business case, and identification of an affordable funding source.

6. WELLBEING OF FUTURE GENERATIONS IMPLICATIONS (INCORPORATING QUALITIES, SUSTAINABILITY, SAFEGUARDING AND CORPORATE PARENTING)

The proposed recommendations if agreed and implemented will result in changes to the Councils reactive maintenance operating model designed to improve communication, prioritise pothole reports to ensure that resources are deployed more effectively, improve the resilience of repairs which combined should result in a better service and more resilient highways network. There are no safeguarding or corporate parenting impacts arising from the proposals.

7. CONSULTTEES:

Cabinet
Member Reference Group
Officer Working Group
SLT
Finance

8. BACKGROUND PAPERS:

[County Council 5th March 2026](#)

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Appendix 1 – Agreed Motion 5th March 2026

Submitted by County Council Tony Kear

This Council:

Notes the growing frustration of residents across Monmouthshire at the deteriorating state of our roads and the persistence of potholes.

Recognises the financial strain placed on families and businesses through vehicle damage and unsafe road conditions.

Recognises the ongoing decline in the condition of the county's roads and the authority's continued failure to effectively address hazardous and recurring potholes.

Considers that the administration's short-term practice of repeatedly patching and re-patching potholes delivers poor value for money and does not provide a sustainable solution

Calls for a revised proactive, preventative and more sustainable approach to road repairs

Resolves to commission an urgent and transparent review of alternative methods of road repairs including a full cost analysis.

Requests that the administration brings forward a clear action plan within six months with proposals to repair the county's highways in a more sustainable and cost-effective way.

Calls for the publication of clear and transparent performance data on highways maintenance spending and outcomes.

Appendix 2 – Existing Processes

Process	Nature of Repair	Status	Scheduling	Process Description	Comments/Benefits/Risks
Cold lay	Temp	Make Safe	Reactive Emergency	Minimal preparation of defect. Fill pothole with material to suitable level and compact.	All year round process. Addresses immediate risk. Reactive to demand, can be carried by all crews and response is effective in and out of hours for emergencies on all roads. Quick, high volume of cost effective repairs. Doesn't address cause of failure. May result in further visits to that defect or adjacent. Low level of resources required - small crew, vehicle and material, minimal TM.
Hot Potholing	Semi Temp	Make Safe	Planned non emergency	Minimal preparation of defect, tack coat, lay and compact.	All year round process. Used in larger areas where immediate intervention is not required so proactive. Can be adapted to respond to periods of high demand. Developed by crews to be a more enduring repair for safer roads. Can be used on all roads.
Patching	Permanent	Replace/repair	Planned	Use mini planer to prep the defect for repair. Can be hand laid or surfaced with a paver. Seal joints	Generally a seasonal process during dry weather. Not a pothole repair, considered and deliberate for surface failure before full failure of the highway. More expensive, requires resource for TM, plant and material (disposal and new). More acceptable finish Own plant used.
Minor resurfacing	Permanent	Replace/repair	Planned	Plan and reinstate	Generally seasonal process but can be undertaken all year round. Surface defects machine planed and laid. Smaller sections of highway rather than whole length. Plant hired and works delivered by operational crews.
Resurfacing	Permanent	Replace/repair	Programmed	Removal and relay of failed surface.	Generally seasonal process but can be undertaken all year round. Machine planed and laid surface finish. Longer continuous sections of road. Plant hired in and delivered by operational crews.
Reconstruction	Permanent	Replace/repair	Programmed	Extensive removal and reconstruction of lower structural layers.	Generally seasonal process but can be undertaken all year round. Full replacement/reconstitution of highway structure. Machine laid. May be delivered by operational crews or external contractors
Surface Dressing	Preventative	Arrest Deterioration	Programmed	Applied binder and chippings to surface	Seasonal process during dry weather. Does not fill potholes, used to prevent their formation. A limited amount of prep work is required. Considered as part of whole life maintenance. Works delivered by specialist external contractor.

Appendix 3

Workstream 1: Options Appraisal of Existing and Proposed Technologies

1. The objective of this options appraisal is to review alternative repair methods, processes and materials against current process to establish if they could be implemented alongside or replace current maintenance methods and in turn reduce the overall demand for pothole repairs through the delivery of permanent repairs.
2. A number of alternative pothole repair methods, equipment, materials and process trials have been carried out and considered based on capital investment, output, productivity, operational costs, flexibility and environmental impact against the existing methods utilised by the authority. Due to the unique nature of these processes and the environment in which they are individually best suited, it has not been possible to make direct comparisons but assessed for their suitability in repairing potholes across the network and throughout the year particularly when potholes are prevalent in winter and wet periods. Appendix 2 provides details of the current repair processes undertaken by the authority as part of the highway maintenance programme. Structural maintenance information has been included for completeness but falls outside of the pothole repair review.
3. The processes and methods assessed are listed along with a summary of the trials carried out and their outcome. Refer to Appendix 3 for additional process information. Taking supplier advice into consideration, various road conditions and locations were selected for each of the processes so that the limitations could be evaluated including at high stress sites.

4. **Method 1 – Viafix Cold Lay Pothole Repair Material Trial**

- 4.1 *Outcome:* Material used as a direct substitute to hot and cold lay tarmac carrying out reactive, make safe temporary repairs at various locations.
- 4.2 *Advantages:* Minimal defect preparation required. The product is water activated and can be used in all weather conditions. Self-compacting. The material enables a feathered edge to achieve an improved finish, reduces water ingress and the likelihood of repeat visits. Use for reactive make safe in and out of hours. Shelf-life of product. Approved product for highway use.
- 4.3 *Disadvantages:* Higher cost than deferred set cold lay and hot materials.

Finances: Cost comparison over a 16-week period:-

	Viafix Cold Lay	Tarmac	Variance	
Price Per Ton	450	105	345	Viafix is delivered to site whereas we need to collect tarmac from dispatch plant. We will see a saving in travelling time.
Est Number of tonnes used (over 16 week winter period)	160	160	-	
Total Cost	72,000	16,800	55,200	

- 4.4 *Conclusion/Recommendation:* Viafix offers a viable replacement for the cold lay deferred set material currently used particularly in wet conditions where the product provides a more durable repair with a better-quality finish reducing the need for repeat visits.

5. **Method 2 – Spray Injection Patching. Velocity Patching Trial**

- 5.1 *Outcome:* Alternative process to hot potholing in rural locations achieving approximately 74m² of repairs per day at an average cost of £29/m²
- 5.2 *Advantages:* Mobile and self-contained process with minimal disruption. Find and Fix process that can be diverted on a reactive basis if required. Can address all defect sizes and depths with good surface finish when laid. Minimal waste. Reduced non-productive time compared to the collection of material for hot potholing process. Estimated 65% carbon reduction compared to standard patching.
- 5.3 *Disadvantages:* Weather sensitive process restricting activities to settled and dry conditions over spring/summer. Better suited to rural locations unless additional resources and extensive planning undertaken. Will not address underlaying failure mechanisms. Not suitable for high stress locations.
- 5.4 *Conclusion/Recommendation:* Based on the trial undertaken, the estimated costs over a 6-week period are £65,000 inclusive of materials. For the network in Monmouthshire, this process is best suited to rural locations. The process is relatively costly and does not represent a cost-effective process without an extensive, pre-planned programme of works in dry conditions.

6. **Method 3 – Elestomac Sealing, Roadmender Trial**

- 6.1 *Outcome:* Regulating and sealing of approx. 55m² of existing temp repairs and joints during the one-day trial.
- 6.2 *Advantages:* Regulates to provide a smooth finish. Material is flexible and bonds to existing surface. Limited preparation required other than surface to be treated being clean and dry. Eliminates joints and defects in the surface and extends the life of reinstatements. Lower environmental impacts with the use of recycled materials.
- 6.3 *Disadvantages:* Does not fill potholes, only seals the surface and regulates. Highly weather dependent process. High material costs but applied as a thin surface.
- 6.4 *Conclusion/Recommendation:* This is not a reactive process and requires potholes to have been filled prior to application. The advantages of the process are noted but it is not recommended that it be included further specifically for the repair of potholes. This process would not address the demand for pothole repairs during wet periods and over the winter.

7. Method 4 – Mobile Planing – JCB Pothole Pro (Trial)/Bobcat Skid Steer

- 7.1 *Outcome:* Over the two-day trial period, the Pothole Pro planed out over 170m² of defects that were then reinstated by hand. Demo of Bobcat equipment in extreme hot weather highlighted how adaptable the equipment and process are in terms of where the equipment can be utilised and material used.
- 7.2 *Advantages:* High output by planing units. Plant is versatile with alternative attachments available to enable higher utilisation of machine when not carrying out pothole repairs. Lower cost of attachments for Bobcat. Bobcat is more compact and easily transported to site. JCB can be driven to site but at low speeds. Year-round process. Durable repairs when coupled with traditional permanent reinstatement techniques.
- 7.3 *Disadvantages:* Suited to planned works to varying degrees depending on demand and equipment. Not responsive to reactive demands due to overall process resources. Potholing productivity and utilisation is limited by capacity of crew undertaking the reinstatement although higher than traditional manual methods.
- 7.4 Capital cost particularly for the JCB. Additional resources required to plan works, manage site and carry out reinstatement. Accessibility of JCB plant in confined sites. Higher attachment costs for JCB. Preparation standard of JCB cutting blade not as defined as a saw cut for the joint between patch and adjacent surface.

Finances: A breakdown of the annual running costs per machine is provided below.

	Bobcat £000's	Pothole Pro £000's	Variance £000's	Notes
Up-front Cost	60	215	155	
Annual Running Costs				
Annual Borrowing Cost (over 10 years)	6.5	23	16.5	
Operatives	200	250	50	Bobcat requires 4 operatives, Pothole Pro requires 5 operatives
Material 5t per day for 226 days	113	113	0	
2 vehicles (hot box and flat bed)	40	40	0	
TM and Plant	30	35	5	
Disposal	35	35	0	
Fuel	12	15	3	
Total	436.5	511	74.5	

- 7.5 *Conclusion/Recommendation:* A mobile planning unit provides a process for permanent repair/reinstatement that would sit between the reactive make safe/hot potholing activities and the patching programme that the authority currently undertakes throughout the year. The equipment enables relatively small areas to be prepared for permanent patch reinstatement. Utilisation of the plant can be further improved with the adoption of alternative attachments.

8. Summary of Methods

Method	Estimated Cost £000s	Preferred Option	Notes
Existing Cold Lay & Hot potholing	494	Yes	This is an established approach that is a timely method to address immediate hazards with minimal additional resource required.
Method 1 – Viafix Cold Lay Pothole Repair Material	56	Yes	Viafix can be utilised in place of current cold lay material due to its durability and performance in winter conditions
Method 2 – Spray Injection Patching. Velocity Patching (6-week period)	65	No	This process would not address the demand for pothole repairs during wet periods and over the winter.
Method 3 – Elestomac Sealing, Roadmender Trial (Discounted)	N/A	No	This process would not address the demand for pothole repairs during wet periods and over the winter.
Method 4 – Mobile Planing – JCB Pothole Pro	511	No	More expensive, needs more resources to run, not as adaptable as Bobcat for MCC road network.
Method 4 – Mobile Planing – Bobcat Skid Steer	436.5	Yes	More efficient to operate, more flexible and adaptable for MCC road network.

9. Recommendations

- 9.1 Highway Operations continue to make safe high-priority defects on a reactive basis using hot and cold lay materials. This is an established approach that is a timely method to address immediate hazards with minimal additional resource required.
- 9.2 Implement Method 2 - During periods of wet and cold conditions, Viafix be utilised in place of current cold lay material due to its durability and performance in these conditions. Long term, utilisation of this material will reduce the quantity of return visits due to failed make safe temporary repairs.
9. Implement Method 4 - Based on cost of investment, suitable productivity levels, output, operational costs and durability of repair, it is recommended that the authority invests in a Bobcat skid steer with planer attachment to undertake permanent reinstatements of defects and temporary cold and hot laid make safe repairs.

10. Post Trials

- 10.1 Since completion of the trials, weather conditions have been exceptionally warm and dry for prolonged periods. No repairs undertaken have failed, however, the deeper patches carried out by the injection jet patching process on rural roads have shown signs of settlement resulting in undulations of the surface. Wheel tracking marks have been noted on the Roadmender patches at the higher stress locations subjected to turning movements of large vehicles. All repairs will continue to be monitored over the coming 12 months.

- 10.2 There is no single pothole repair process or product that could be adopted to address all challenges faced when undertaking pothole repairs on such a varied highway network. Each process having strengths in differing aspects of pothole repair work in various conditions and settings.
- 10.3 Highest demand for pothole repairs is during the wettest months and winter period. It is acknowledged that, at present, there is not a resource to carry out permanent reinstatement of individual pothole defects or reinstatement temporary repairs. Of the methods reviewed, mobile planning units offer the ability to carry out permanent defect repairs in the widest of conditions.
- 10.4 By way of planned proactive works, mobile planing units offer a year-round flexible and responsive process to repair individual defects and permanently reinstate make safe temporary repairs. The smaller Bobcat skid steer option offers a flexibility in where it can be deployed. The JCB Pothole Pro has a capability to prepare patch repairs in excess of the capacity to reinstate the carriageway.
- 10.5 Adopting the recommendations will ensure that temporary repairs undertaken in adverse weather and permanent repairs will extend the life of a repair and reduce the need for repeat visits, lowering the overall demand on the operational teams, improved quality of the repair finish, reduce risk exposure for the authority and enhanced reputation based on the quality of the repair.
- 10.6 To varying degrees, suppliers of all processes claimed to reduce CO2 emissions in comparison to traditional pothole repair methods.

Process	Nature of Repair	Status	Scheduling	Process Description	Comments/Benefits/Risks	Additional resources	Trial/Demo
Viafix Cold Lay	Temp/Perm	Make safe/reinstatement	Reactive	Minimal preparation of defect. Fill and leave	Direct replacement for current cold lay process. Viafix can be used in all conditions without the need for prep. Must have water to set/cure so works well in winter conditions. Self-compacting and can be trafficked immediately. Feathered edge improving driving surface. HAPAS approved material. Durable repair with fewer return visits. Cost is high in comparison to deferred set.	Requires pothole crew in line with existing pothole process	Trial of materials available through supplier. 10 x 1t bags purchased and used through the Llanfoist reactive pothole team in the Hereford Road and Highfield Road area of Monmouth during June
Velocity/Jet Patching	Temp/perm	Make safe/semi-permanent repair	Planned	Self-contained process. Vehicle equipment blows out the defect and spray injects coated chippings into the defect.	Seasonal process to achieve for best and durable results. Mobile, self-contained requiring little additional resource. Can be deployed on a "find and fix" basis. Most effective in rural locations with low traffic volumes and low stress sites. May not treat underlying failure mechanism. Follow up sweeping required. Large/deep defects addressed. Good surface finish when laid as can be over laid past extents of defect. Reduced non-productive travelling time. Works to be planned in order to gain highest productivity.	Generally, works contracted to specialist contractor over fair-weather period.	Trial of process undertaken by contractor between 27/4/26-8/5/26. Demo for members 29/4/26. Trial cost £21k. Deployed to rural roads where defects of various types, sizes and depth were repaired. Planning required to identify suitable locations.

Bobcat and Planer	Permanent	Permanent repair	Planned	Mobile process patch planing preparation for permanent pothole repair. Plane out defect with reinstatement by hand lay and compaction.	Maintenance activities can be undertaken year-round. High areas of preparation beyond capacity of surfacing crew. Planer attachment to Bobcat skid steer vehicle. Equipment prepares defect for reinstatement only. Small mobile unit transported to site by trailer. Works need to be planned in advance to gain full utility. Requires the arisings to be disposed of and reinstatement to be done by supporting crews. Other attachments available to achieve full utilisation. Not mobile on highway but can be deployed on trailer.	Process delivered in house requiring minimum of driver and three operatives, hot box and flat bed, trailer and small plant. Traffic management where necessary. Likely 6t/day patching by crews.	Trial/Demo unavailable. Process similar to Pothole Pro.
JCB Pothole Pro	Permanent	Repair	Planned	Mobile process patch planing preparation for permanent pothole repair. Plane out defect with reinstatement by hand lay and compaction.	As with other patching. Preparation for reinstatement only. Larger mobile unit on highway but relatively slow speeds. Flexible planing head. Works need to be planned in advance to gain full utility. Requires the arisings to be disposed of and reinstatement to be done by supporting crews. Likely to require additional planning for TM and closures due to the size of vehicle and operation. Not as responsive to reactive or changing priorities due to operational resource required to be mobilised. Higher cost of attachments to gain operational utilisation. Poor cut edge compared to saw cut.	Process delivered in house requiring minimum of driver and four operatives, hot box and flat bed and small plant. Traffic management required. No advantage over Bobcat. Operational output on the scale of the current planer/paver process carried	Demo available through supplier. Two days 10/11th June. Demo with members on 11th June. Planing and patching of various defects, sizes and locations in Goytre. Additional planning and resources needed.

						out by the authority.	
Roadmender	Permanent	Repair	Planned	Application of flexible, flowable material over defect.	Limited prep - clean and dry. Flowable material, in-situ. Can be used on a variety of defects not just potholes. Lower carbon impact replacing bitumen binder with recycled materials. Limited additional material. Required existing defects to be filled prior to application. Good regulated finish giving smoother surface.	Not a pothole repair process but seals joints and regulates. Extends the life of reinstatements	Trial and Demo on 9th June. Pen y Pound, Abergavenny. Various temp repairs and minor surface defects treated with thin overlay. Approximately 55m2 treated. No existing defects addressed.
Preventative Maintenance	Preventative	Arrest Deterioration	Planned	Various solutions available	Numerous methods depending on site specifics. Prevents the formation of defects. Element of advanced planning and preparation is required.		Expansion of existing programme. Alternative sites and methods.

Appendix 4 - Performance Indicators

Purpose

To set out a clear performance framework for highway maintenance, with an initial focus on pothole reporting, repair activity, road condition and planned maintenance. The framework brings together customer reports, inspection reports, repair records, condition survey data, and resurfacing plans to provide a more consistent view of highway maintenance performance.

It identifies measures that can be reported now and how future reporting will be developed as planned systems and data improvements are made. It also identifies how more detail on the list of schemes and network condition information can be shared and reported annually through a proposed Highways Maintenance Report. This will support better performance management, evidence-based decision-making, clearer communication with councillors and residents, and a stronger understanding of the impact of highways maintenance investment.

Performance Indicators

How Much

- o Number of pothole reports received
- o Number of potholes
- o Number of potholes repaired

How Well

- o Percentage of potholes repaired in target time

What difference has this made

- o Percentage of roads in good, average and poor condition (see network condition report)

Highway Maintenance (see network condition report for more detail)

- o Total spend on highways maintenance programme
- o The length of road repaired through highways maintenance programme
- o The number of potholes repaired through highways maintenance programme
- o The number of potholes prevented through highways maintenance programme

Appendix 4.1 provides further detail on indicator definitions, development requirements and reporting frequency.

This reporting will be enabled by improved data capture, data flows, system development and integration, as set out in Appendix 4.2.

Network Condition Report

The Red Amber Green data, as on the GAIST condition data extract below, can be amended on a yearly basis from the original base data to reflect the improvement on the highway network as a result of capital and grant investment on the network.

The list of schemes would be published out circa start of the calendar year; with a caveat that the programme is fluid and subject to change depending on funding and on-going costs impacting the amount of delivery, network management constraints i.e. coordination of works (- ideally we encourage statutory undertakers to undertake their works first - therefore we may not be able to complete our programme and works could potentially slip into future years) and then at the end of the

financial year the list of schemes completed reported back and reflected on the overall graphic - showing the improvement.

However, it must be noted that although we are reporting the network condition improving – the lengths of network where no improvements have been undertaken will not remain static and depending on the age of the material a process of deterioration such as binder oxidation etc. can take place thus resulting in no strength in the material matrix causing chip loss and the formation of potholes, cracking and other carriageway defects.

Therefore, on an annual basis we can provide network condition indicators which will reflect the % improvements.

Extract of the GAIST Condition Data



We will also reflect the following which aligns with the LGBI reporting we are currently undertaking for schemes funded by this revenue source. (we could look to expand this for all

resurfacing regardless of funding stream) – showing by spending £x on the carriageway we repaired X number of potholes and have prevented x number of potholes.

Road Class	Scheme Location	Location of Plant (Post Code)	Integ/ Overlay	Depth (mm)	Length of Scheme (km)	Area of Scheme (m ²)	Are the Work Dates Known? (Yes/No)	Start Date	End Date	Estimated Cost (£)	Potholes Repaired	Potholes Prevented	Is Scheme Finished? (Dropdown)
					6,810	44,218				£1,898,960	49	796	
										Accumulated Spend			
Unclassified	J21 84251: Foston Road - 8421: Wenslow Road		Yes	40	1,000	7,500	No	07/02/2025		£380,000			
Unpaved	J21 84811: J21 84811: A1444 Walsby Street Traffic Lights		Yes	40	8,000	6,700		06/02/2025	11/06/2025	£380,000			
Classified (Numbered)	Notton - County Boundary		N/A		1,010	10,000	No	22/05/2025		£172,500	33	525	No
Classified (un-numbered)	Deighton Road, St. Annes		N/A		3,025	3,300	Yes	24/02/2025		£85,460	17	271	Yes

From this information we can set a baseline where the authority can specify that we would not want the level of red to exceed x%. This can be on the overall network length or specific to classification.

Use

Specific tailored views of the indicator data will be provided for highways officers, councillors and residents.

Ø For highways officers, data will be reported through the new highways system, including improved mapping and dashboards, to monitor performance, improve decisions and target resources

Ø For councillors, data will be reported through a corporate dashboard providing county and local ward data supporting understanding of local pressures and scrutiny of performance.

Ø For residents, it will be reported through website updates providing county data on service demand and annual highways maintenance network condition reporting. This will also be available to Councillors. Providing updates on performance and action being taken.

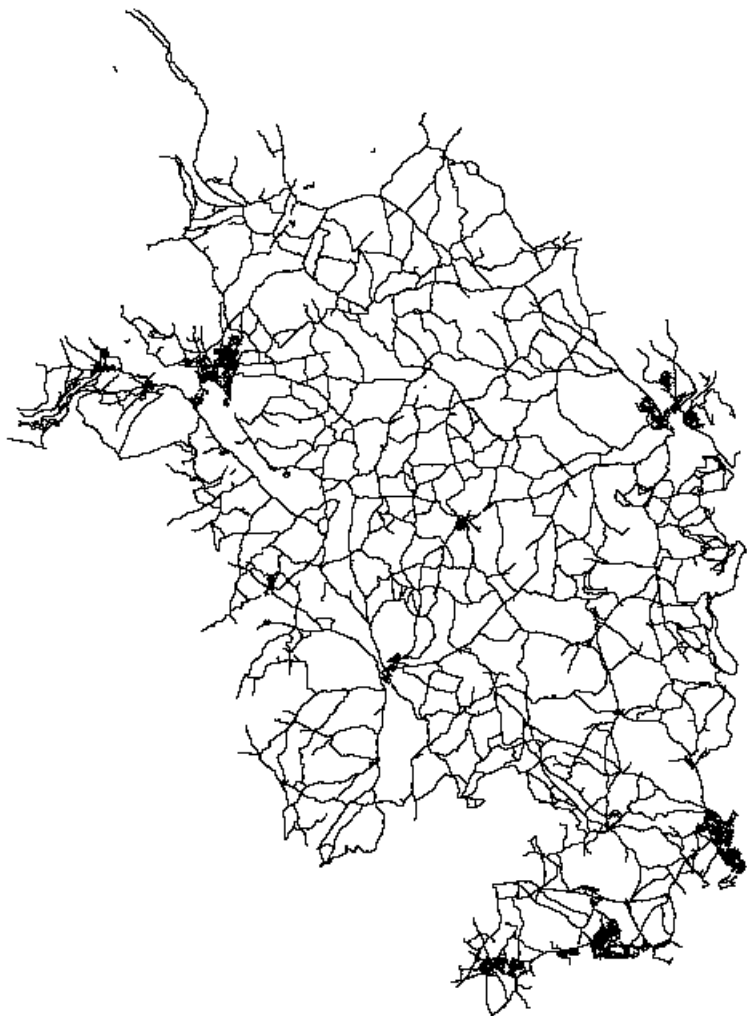
Example reporting views are provided in Appendix 4.2 and 4.3

Appendix 4.1 – Performance Indicator explanation

Performance Indicator	Breakdown	Frequency	Available	Explanation	Source
Number of pothole reports received	Road classification By ward	Monthly	Now (New My Mon form) (New process – Approx. April 27)	Reports received through My Monmouthshire. Multiple reports might be received for same pothole	Now - My Council Services April 27 – New system
Number of potholes repaired	Road classification By ward	Monthly	Now (New My Mon form) (New process – Approx. April 27)	Reports completed through My Monmouthshire. Multiple repairs might be completed for same pothole	Now - My Council Services April 27 – New system
Number of potholes	Road classification By ward	Monthly	New process – Approx. April 27	Number of potholes not repaired. New parent and child relationship. Removing multiple reports on same pothole	New system
Percentage of potholes repaired in target time	Prioritisation (Emergency, High, Routine)	Annually or Quarterly	New process – Approx. April 27	Repairs completed within targets times for each prioritisation category. A range of factors can affect when a repair is carried out.	New system
Percentage of roads in good, average and poor condition	Road Classification	Annually	Existing survey – Calculate for 2025/26 in April 2027	Survey classification of Red, Amber, Green. Based on point in time condition surveys.	GAIST survey
Capital highways maintenance programme: - Spend - Length of road repaired - Number of potholes - Number of potholes prevented		Annually	Existing process – Calculate for 2025/26 in April 2027	Capital highways maintenance programme schemes completed in the year. Using existing reporting.	Capital highways maintenance programme (LGBI reporting approach, expanded for all resurfacing)

Highways Maintenance Report - 2026

Our Network



- The Road network managed by MONMOUTHSHIRE is currently 1,640.7km (*including the motorway & trunk road network which is managed by SWTRA*)
- The network is made up of

DFT Classification	Urban	Rural	Total
Principal Roads			
Classified Numbered			
Classified unnumbered			
Un classified Roads			

- The M4/ M48/A40/A4024/A465(HOV)/A465T/A48T/A466T/A449 – are all managed by South Wales Trunk Road Agency

- In 26/27 our carriageway surfacing funding sources were as follows:

FUNDING SOURCE	AMOUNT
LGBI	£
CAPTIAL	£
ANY OTHER FUNDING SOURCE	£

- From the base line GAIST data the following was assessed – with the 2026 investment the improvements have resulted in the following:

Year	% Grade 1	% Grade 2	% Grade 3	% Grade 4	% Grade 5
2025					
2026					

Winter Impact/Flooding

- Highway Operations – potential to enter in information re. your service area and the impact the weather/storms have had on the carriageway.
- With the freeze thaw process on the network and the stormshave all played their part in accelerating the deterioration of an aging network

Highway Safety Inspections

- We currently have 2 Asset Inspectors
- Routine safety inspections are undertaken on highway maintainable at public expense, with the roads which have a strategic network importance being inspected on a monthly basis recording all defects observed which are likely to have an impact on the highway user.
- The Asset inspectors also inspect on an ad-hoc basis from information provided by My Monmouthshire and as part of on-going investigation works to help provide a S58 defence for the authority.

How to Report A Problem

- Enter in details of how our stakeholders can contact us.

Appendix 4.3 – Data & System developments

Resident (My Monmouthshire) reporting process:

Work to improve accuracy of location reporting in My Monmouthshire allows for greater accuracy for officers, the ability to show location of reports back to residents and provides the data quality needed for data analysis.

New steps have been put in place within the reporting system to reducing duplicate reports.

Residents made aware of existing reports made and their status e.g. with inspector. Resident is given the option to be notified of the progress within an existing report rather than make a new report.

Existing pothole reports & status of reported potholes provided through My Monmouthshire.

New data fields will be captured within the My Monmouthshire form to enhance reporting capabilities. The form has been updated to include additional drop-down options, improving data consistency and usability.

Information is now captured on the ward in which each report is located, enabling ward-based reporting and analysis. Additional highway network information is also collected, including the road classification and route code associated with each pothole report.

This enhancement allows reports to be linked directly to highway maintenance schedules and inspector reports, supporting more effective monitoring, planning, and decision-making.

Highway Operatives:

The digitisation of pothole reporting and repair logging through the use of handheld devices will improve communication with customers by enabling repair updates to be recorded and processed more efficiently.

This will reduce delays in updating customers once a repair has been completed, ensuring more timely and accurate information is provided regarding the status of their reported issue.

This, in turn, will improve the accuracy of performance KPI reporting by reducing delays between repair completion and the updating of records.

System development (In progress):

Replacement highways management system to combine defect (reported by public and inspectors), job and performance data in one place

Development of dashboards within highways asset management system and data feeds to organisation dashboards (to be developed)

Appendix 5 – Integrated Impact Assessment



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Integrated Impact Assessment Template (incorporating Equalities, Socio-economic Duty, Future Generations, Welsh Language Measures, Corporate Parenting)

Name of the Officer completing the evaluation Debra Hill-Howells Phone no: 01633 644281 E-mail: debrahill-howells@monmouthshire.gov.uk	Please give a brief description of the aims of the proposal This report provides an update on the work undertaken to address the highways reactive maintenance motion agreed by Council on 5 Th March 2026.
Name of Service area Infrastructure	Date 8 th September 2026

- 1. Are your proposals going to affect any people or groups of people with protected characteristics?** Please explain the impact, the evidence you have used and any action you are taking below.

<u>Protected Characteristics</u>	Describe any positive impacts your proposal has on the protected characteristic	Describe any negative impacts your proposal has on the protected characteristic	What has been/will be done to mitigate any negative impacts or better contribute to positive impacts?
Age <i>Consider the impact on our community in relation to age, e.g. how do we engage with older and younger people about our services, access issues etc. Also consider what issues there are for employment and training.</i>	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report

<u>Protected Characteristics</u>	Describe any positive impacts your proposal has on the protected characteristic	Describe any negative impacts your proposal has on the protected characteristic	What has been/will be done to mitigate any negative impacts or better contribute to positive impacts?
Disability <i>Consider the impact and what issues there are around each of the disability needs groups e.g. access to buildings/services, how we provide services and the way we do this; producing information in alternative formats, employment issues etc.</i>	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report
Gender reassignment <i>Consider the provision of inclusive services for transgender people and groups. Also consider what issues there are for employment and training.</i>	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report
Marriage or civil partnership <i>Same-sex couples registered as civil partners have the same rights as married couples and must be provided with the same benefits, such as survivor pensions, flexible working, maternity/paternity pay and healthcare insurance. Consider the impact of your proposal on these rights.</i>	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report

<u>Protected Characteristics</u>	Describe any positive impacts your proposal has on the protected characteristic	Describe any negative impacts your proposal has on the protected characteristic	What has been/will be done to mitigate any negative impacts or better contribute to positive impacts?
Pregnancy or maternity <i>A woman is protected from discrimination during her pregnancy, maternity leave and 26 weeks from the day she gives birth. Including the provision of services, goods and facilities and recreational or training facilities. Consider the impact of your proposal on these protections.</i>	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report
Race <i>What will the proposal do to promote race equality with the aim of eliminating unlawful discrimination, promoting equality of opportunity and promoting good relations between different racial groups. Think about the potential to affect racial groups differently. Possible issues include providing translation/interpreting services, cultural issues and customs, access to services, issues relating to Asylum Seeker, Refugee, Gypsy & Traveler, migrant communities and recording of racist incidents etc.</i>	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report
Religion or Belief <i>Consider the impact e.g. dietary issues, religious holidays or days associated with religious observance, cultural issues and customs. Also consider what issues there are for employment and training.</i>	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report

<u>Protected Characteristics</u>	Describe any positive impacts your proposal has on the protected characteristic	Describe any negative impacts your proposal has on the protected characteristic	What has been/will be done to mitigate any negative impacts or better contribute to positive impacts?
Sex <i>Consider what issues there are for men and women. Will this impact disproportionately on one group more than another e.g. equal pay, responsibilities for dependents, issues for carers, access to training, employment issues.</i>	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report
Sexual Orientation <i>Consider the provision of inclusive services for e.g. older and younger people from the Lesbia, Gay and Bi-sexual communities. Also consider what issues there are for employment and training.</i>	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report

2. The Socio-economic Duty

The Socio-economic Duty requires public bodies to have due regard to the need to reduce inequalities of outcome which result from socio-economic disadvantage when taking key decisions.

Socio-economic disadvantage can be defined as living in less favourable social and economic circumstances than others in society. It also includes social justice, which is about reducing inequalities by working towards more equal distribution of wealth and opportunities so everyone can achieve their full potential.

Consider how the proposal could affect the following vulnerable groups:

Armed Forces Community (including veterans)

Single parents

Vulnerable families

Single adult households

Carers

Students

People living in the most deprived areas

Pensioners

Homeless People

People misusing substances

People who have experienced the asylum system

People involved in the criminal justice system

<u>Socio-economic Duty</u>	Describe any positive impacts your proposal has in respect of people suffering socio economic disadvantage	Describe any negative impacts your proposal has in respect of people suffering from socio economic disadvantage.	What has been/will be done to mitigate any negative impacts or better contribute to positive impacts in relation to the Socio-economic disadvantage?
<i>Think of what evidence you have about socio-economic disadvantage and inequalities of outcome in relation to this proposal. Will it impact disproportionately on certain groups? Can the proposals be improved to reduce inequalities of outcome?</i>	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report	The report provides the details of the review of highways reactive maintenance. There are no identified impacts arising from this report

3. Policy making and the Welsh language

What are the effects that the proposals would have on the Welsh language, specifically on opportunities for people to use Welsh and on treating the Welsh language no less favourably than English? How could positive effects be increased, or negative effects be mitigated? Explain how you believe the proposals could be improved so as to have positive effects or increased positive effects on opportunities for people to use the Welsh language and on treating the Welsh language no less favourably than the English language.

How does your proposal impact on the following aspects of the Council's Welsh Language Standards :	Describe the positive impacts of this proposal	Describe the negative impacts of this proposal	What has been/will be done to mitigate any negative impacts or better contribute to positive impacts
Policy Making: <i>Consider what impact this policy decision will have on the Welsh Language. This includes opportunities for people to use the language, opportunities to promote the language and treating the language no less favourably than the English language. Include any data and evidence e.g. WESP, Census Data, Cymraeg 2050, Welsh Language Strategy.</i>	The report provides the details of the review of highways reactive maintenance. Reporting can be undertaken in Cymraeg and English.	The report provides the details of the review of highways reactive maintenance. There are no identified negative impacts arising from this report	None identified at this stage
Operational: Recruitment & Training of workforce <i>Carefully consider whether vacant posts require Welsh language skills as a desirable or essential skill. This is especially pertinent with front-line roles as more than 10 % of the population of Monmouthshire speak Welsh. Also, when assessing the need for Welsh language skills, keep in mind the existing Welsh language skills within the workforce. In service areas where there is a current lack of Welsh language skills, posts should be advertised as essential Welsh language. Additionally, consider where further training may be needed to increase the number of staff who can speak Welsh and to enhance the skills of current Welsh speakers.</i>	Roles will be advertised as Welsh desirable, and all colleagues will be given the opportunity to attend Cymraeg training.	None identified at this stage.	None identified at this stage.
Service Delivery: Use of Welsh language in service delivery <i>When advertising our services you must promote the fact that people can deal with the council in Welsh by</i>	Service requests can be undertaken through the medium of Cymraeg, and all communications are available bi-lingually.	Service requests can be undertaken through the medium of Cymraeg, and all communications are available bi-lingually.	Service requests can be undertaken through the medium of Cymraeg, and all communications are available bi-lingually.

phone, email, twitter, Facebook, letters, forms, website transactions etc.			
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4. Does your proposal deliver any of the well-being goals below? Please explain the impact (positive and negative) you expect, together with suggestions of how to mitigate negative impacts or better contribute to the goal. There's no need to put something in every box if it is not relevant!

<u>Well, Being Goals</u>	Describe the positive impacts the proposal has on the wellbeing goal.	Describe the negative impacts the proposal has on the wellbeing goal.	What actions have been/will be taken to mitigate any negative impacts or better contribute to positive impacts?
A prosperous Wales <i>An innovative, productive and low carbon society which recognises global limits and uses resources efficiently (including acting on climate change); a skilled and well-educated population in an economy which generates wealth and provides jobs.</i>	The review has considered the carbon impact of the various technologies trialled and recommends a new operating model which will improve operating efficiencies and the resilience of the repairs undertaken. This should result in the need for repeat visits to re-fill potholes, thereby reducing emissions from both travel and the fill material. The report also recommends the appointment of two additional Inspectors to implement a prioritization process and the digitization of the process to remove paper copies and improve communications.	None identified at this stage	The report recommends a number of improvements to the current operating model.

<u>Well, Being Goals</u>	Describe the positive impacts the proposal has on the wellbeing goal.	Describe the negative impacts the proposal has on the wellbeing goal.	What actions have been/will be taken to mitigate any negative impacts or better contribute to positive impacts?
A resilient Wales <i>Maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change).</i>	N/A	N/A	N/A
A healthier Wales <i>People's physical and mental well-being is maximised and in which choices and behaviours that benefit future health are understood.</i>	N/A	N/A	N/A
A Wales of cohesive communities <i>Communities are attractive, viable, safe and well connected</i>	The proposal will improve the effectiveness of reactive repairs ensuring a safe highways network for all users.	None identified at this stage	None identified at this stage
A globally responsible Wales <i>Taking account of impact on global well-being when considering local social, economic and environmental wellbeing</i>	The proposal seeks to improve the robustness of deployed reactive maintenance methods. This will reduce the demand for materials to re-fill failed interventions, reduce emissions and enable technology to improve the effectiveness of reactive maintenance.	The impact of weather events on local highways infrastructure is increasing the need for reactive interventions. The proposal seeks to mitigate these impacts by proposing alternative cold fill materials which are more resilient than the current method.	The proposals seek to improve reactive maintenance methodologies thereby improving the safety and resilience of the highway. It is recognised that a permanent repair such surface dressing or re-surfacing is the optimum intervention, but these are limited by available resources. The proposed planing method will elongate the residual life of the

<u>Well, Being Goals</u>	Describe the positive impacts the proposal has on the wellbeing goal.	Describe the negative impacts the proposal has on the wellbeing goal.	What actions have been/will be taken to mitigate any negative impacts or better contribute to positive impacts?
			highway enabling resources to be prioritised to greatest need.
A Wales of vibrant culture and thriving Welsh language <i>Promotes and protects culture, heritage and the Welsh language, and participation in the arts, and sports and recreation</i>	N/A	N/A	N/A
A more equal Wales <i>People can fulfil their potential no matter what their background or circumstances. (This includes the protected characteristics listed in Section 1 above. You can add more detail there. Don't forget to think about the impacts on poverty)</i>	N/A	N/A	N/A

5. How has your proposal embedded and prioritised the sustainable governance principles in its development?

<u>Sustainable Development Principles</u>	Does your proposal demonstrate you have met this principle? If yes, describe how. If not explain why.	Are there any additional actions to be taken to mitigate any negative impacts or better contribute to positive impacts?
 Balancing short term need with long term and planning for the future Long Term <i>We are required to look beyond the usual short term timescales for financial planning and political cycles and instead plan with the longer term in mind (guidance says at least 10 years, but preferably 25)</i>	The proposal seeks to maximise the effectiveness of reactive maintenance within resource constraints. A comprehensive review has been undertaken which has considered the end-to-end operation, digitization, communications, data and reporting and longevity of the preferred solution. The recommendations are the preferred solution to improve resilience and target resources to the greatest need. A review of the effectiveness of the interventions will take place no later than 2 years after their implementation to ensure that they are still delivering the best outcomes for the service and our communities.	None identified at this time.
 Working together with other partners to deliver objectives Collaboration	The review has been cross-directorate and led by a Member Reference Group. Feedback has also been sought from other Local Authorities to ascertain the effectiveness of the systems we are proposing to deploy.	None identified at this stage.

<u>Sustainable Development Principles</u>	Does your proposal demonstrate you have met this principle? If yes, describe how. If not explain why.	Are there any additional actions to be taken to mitigate any negative impacts or better contribute to positive impacts?
 Involvement Involving those with an interest and seeking their views <i>Who are the stakeholders who will be affected by your proposal? Have they been involved? Do those people reflect the diversity of the area which is served?</i>	Improvements to the My Council Services reporting model have been informed by feedback from the Councils Contact Centre, front line and digital colleagues. We will continue to evaluate the effectiveness of the reporting once it is deployed. The review has been cross-directorate and led by a Member Reference Group. Feedback has also been sought from other Local Authorities to ascertain the effectiveness of the systems we are proposing to deploy.	None identified at this stage
 Prevention Putting resources into preventing problems occurring or getting worse	The review has considered how to improve the effectiveness of reactive maintenance methods currently deployed. Where deficiencies have been identified solutions have been proposed which include the appointment of two inspectors to enable all reported pot holes to be assessed and prioritised. It is also recommended that the cold fill material is changed during the winter period to improve the resilience of filling methods.	None identified at this stage

<u>Sustainable Development Principles</u>	Does your proposal demonstrate you have met this principle? If yes, describe how. If not explain why.	Are there any additional actions to be taken to mitigate any negative impacts or better contribute to positive impacts?
Integration Considering impact on all wellbeing goals together and on other bodies <i>Focus here on how you will better integrate the</i> <i>Wellbeing Goals impacts on people, economy and environment described above and balance any competing impacts. Think about impacts the proposal may have on other organisations</i>	The review of reactive maintenance has been cross directorate to ensure that the proposals do not have unintended consequences on other service areas or users and that we can maximise the outcomes with the broader expertise and skill sets. We have also undertaken trials of proposed solutions and sought the views of the Member Reference Group. The proposals seek to improve the existing operating model to deliver a better outcome for the service and our communities.	None identified at this stage, but there will be an ongoing review of the effectiveness of the interventions.

6. Council has agreed the need to consider the impact its decisions has on the following important responsibilities: Corporate Parenting, Care Leavers, Care Experienced People and Safeguarding. Are your proposals going to affect any of these responsibilities?

	Describe any positive impacts your proposal has	Describe any negative impacts your proposal has	What will you do/ have you done to mitigate any negative impacts or better contribute to positive impacts?
<u>Safeguarding</u> <i>Safeguarding in this context applies to children (not yet reached 18th birthday) and adult at risk (identified as a person over the age of 18 and who (a) is experiencing or is at risk of abuse or neglect, (b) has needs for care and support (whether or not the authority is meeting any of those needs), and (c) as a result of those needs is unable to protect himself or herself against the abuse or neglect or the risk of it.) Safeguarding is about ensuring that everything is in place to promote the well-being of children and adults at risk, preventing them from being harmed and protecting those who are at risk of abuse and neglect.</i>	None	None	

<u>Corporate Parenting, Care Leavers and Care Experienced People</u> <i>This relates to those children who are 'looked after' by the Local Authority either through voluntary arrangements with their parents or through a Court Order. The Council has a corporate duty to consider 'children who are looked after especially and to promote their welfare (in a way, as though those children were their own). It also relates to care experienced people (people who have spent time in care when they were under 18 years old). The Council must consider how to help overcome the disadvantages and discrimination they experience.</i>	None	None	
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7. What evidence and data has informed the development of your proposal?

This will include your baseline position, measures and studies that have informed your thinking and the recommendation you are making. It should allow you to identify whether any changes resulting from the implementation of the recommendation have had a positive or negative effect. Key strategies and documents that may help you include: Community and Corporate Plan, Asset Management Strategy, Digital and Data Strategy, Medium Term Financial Strategy, People Strategy, Socially Responsible Procurement Strategy: [Enabling Strategies](#) See Guidance for more examples.

Trails of the proposed technologies on the Monmouthshire network.
 Data and evidence from My Council Services, GAIST survey and Highways asset system.
 Feedback from Member Reference Group, technical experts, other Local Authorities and Contact Centre

8. SUMMARY: As a result of completing this form, what are the main positive and negative impacts of your proposal, how have they informed/changed the development of the proposal so far and what will you be doing in future?

This section should summarise the key issues arising from the evaluation. This summary must be included in the Committee Report Template

The proposed recommendations if agreed and implemented will result in changes to the Councils reactive maintenance operating model designed to improve communication, prioritise pothole reports to ensure that resources are deployed more effectively, improve the resilience of repairs which combined should result in a better service and more resilient highways network.

9. ACTIONS: As a result of completing this form are there any further actions you will be undertaking? Please detail them below, if applicable.

What are you going to do?	When are you going to do it?	Who is responsible?

10. VERSION CONTROL: The Integrated Impact Assessment should be used at the earliest stage, such as informally within your service, and then further developed throughout the decision-making process. It is important to keep a record of this process to demonstrate how you have considered and built in equality and future generations considerations wherever possible.

Version No.	Decision making stage <i>e.g. budget mandate, DMT, SLT, Scrutiny, Cabinet etc</i>	Date considered	Brief description of any amendments made following consideration
1	Council	24 th September 26	

