

HEREFORDSHIRE PUBLIC REALM CONTRACT 2021/22

ANNEX 7 – MANAGING WATER ON THE NETWORK



SERVICE OVERVIEW

SERVICE SUMMARY

Balfour Beatty Living Places (BBLP) will undertake Asset Management and delivery of Capital and Reactive Drainage services on the Public Realm Highway and Land Drainage Assets that are the responsibility of Herefordshire Council (HC), and will support HC as a Lead Flood Authority.

Highway Drainage – Capital

The BBLP Drainage team (with TAMP inputs) will administer all aspects of Highway Drainage maintenance and improvements on behalf of HC, including:

- A risk-based approach to inspection, cyclical and preventative maintenance of highway drainage assets accordance with the HMP and Well Managed Highways.
- Working with the local water authorities, Environment Agency (EA), Parish Councils and land owners to ensure the most effective management of surface water systems and drainage in Herefordshire.

- Utilise the 2012 Highways Maintenance Efficiency Programme (HMEP) Guidance on the management of highway drainage assets approach to managing Highway drainage assets. This guidance will inform the Drainage Lifecycle Plan.
- Enhance the drainage records on GIS and augment details held on the Drainage Assets Register in-line with the Drainage Lifecycle Plan.
- Drainage CCTV camera surveys will be carried out in house or by external contractors to determine the conditions of drainage assets that have known issues and asset data will be fed to the TAMP team
- Disputes with utility companies where highway drainage assets have been damaged or where water is spilling onto the highway, establishing cases where repair costs may be claimed by HC.
- Disputes with landowners / insurers to recover costs associated with resolving problems of root ingress within highway drains

Highway Drainage – Revenue and Routine Reactive

The purpose of this service is to discharge HC's responsibilities consenting and enforcing but to also manage and deliver the programme of rehabilitation, maintenance and improvement works on HC's land drainage assets, including culverts, grills, watercourses, flooding investigations, development control and Routine Reactive Maintenance and Planned Annual Gully Cleansing

Our teams will:

- Work with the local water authorities, Flood Groups, EA, Internal Drainage Boards (IDBs), Parish Councils, Farm Herefordshire and land owners to ensure the most effective management of surface water systems and land drainage (including ditches, ordinary watercourses, grips and inlets) in Herefordshire.
- Discharge of duties under the land drainage act, in accordance with approved protocol
- Management of drainage ditches and watercourses where HC are the riparian owner, or where the duty for maintenance has been demonstrated to rest with HC.
- Maintenance of culverted watercourses (on specific land drainage schemes) built by previous Councils and by HC, where written maintenance agreements have not been identified.
- Our teams will carry out one-off land drainage works to alleviate community affecting flooding issues where resolution of land drainage issues has been exhaustive, and it has been agreed with HC that enforcement is not to be taken.
- A risk-based approach to inspection, cyclical, planned and preventative maintenance of land drainage assets.
- A planned county wide risk-based approach to cyclical Gully Cleansing

Highway Drainage – Flood Risk Management

- Under delegated responsibilities, act on behalf of HC in their role as LLFA
- Selectively where funds and resources are available, undertake studies to enable funding grants to be accessed for Flood Risk reduction works. Appropriate design options will be identified, sufficient for a funding application to be progressed/made. As some areas have a greater level of flood risk than others, it will be necessary to prioritise those areas needing further assessment so that resources and funding are targeted at those areas and activities of highest importance. (Note, HC isn't the only source of funding – this could come from government, local funding, private funding, developer contributions, etc.)
- Carry out investigations of flooding incidents, in accordance with agreed quality plans that use a risk-based approach to determine the need for investigations. EA data will be used where relevant.
- Provision of drainage/flooding technical advice regarding planning applications.

- Implementing, monitoring and maintaining the Local Flood Risk Management Strategy (LFRMS) action plan on a continuous basis throughout the year,
- Development of the LFRMS and participation in consultation and engagement events. Helping communities to help themselves.

Where agreed, Flood Risk at sensitive sites within Herefordshire will be investigated by conducting Flood Studies. These studies may indicate measures or further capital investments that will be needed to reduce flood risk to land, property and highways. Potential sites are escalated to the asset management team for review and prioritised for action.

Land and Property may be exposed to increased flood risk as a result of construction works. This has often resulted in flooding episodes. In these cases, drainage schemes involving both revenue and capital investment are required to resolve these problems. Support will be provided to HC in dealing with construction works that have increased flood risk.

SERVICE SUMMARY		
		Output
Capital Activities	Highways Drainage Capital Schemes	Feasibility, design, project management and delivery of Highways Drainage schemes/investigations at various locations in Herefordshire. In addition to this there is allowance for 2022 -2023 Preparation works. <i>Location Details shown in Appendix C</i>
	Drainage & Flood Asset Management	Management of the Asset Data Programme system to inform of current and future works programming. In addition, includes site reviews to confirm requirements.

	Highway Drainage Enquiries	This is to respond to enquires raised by members of the public in-year relating to Highways Drainage. It includes public liaison, inspection of issues and determination and prioritisation of solutions which in turn will inform the Asset Management Programme of works.
	Drainage Asset Inspections	<p>Inspections are undertaken by the Drainage Technicians in year to update the knowledge and condition of the critical assets in the network. This allows the Asset Management Drainage Team to then prioritise for cleansing and capital maintenance.</p> <p>A number of assets will be inspected during the period (course of the year) in the two Northern and Southern halves of the County. The number of inspections will be greater than normal to review the impacts of recent severe storms and flooding experienced by the county. These assets listed in Appendix C.</p> <p>Includes biennial Principal Inspection of Ross Flood Alleviation Scheme and an allowance for subcontractors</p>
	Additional Drainage Engineer	Additional Drainage Engineer to develop enquiries from technicians and review older enquiries
	Additional Drainage Technician	Highway Drainage Enquiries

	Purchase of Additional Plant	Purchase of 2 No. 1 Ton Dumpers 3 No. 2.7 Ton Excavators
	Pump Station Asset Maintenance	<p>Mechanical and Electrical Inspections and Servicing costs for 4 pumping stations with comments on the structural condition of the asset. This is carried out by a specialist subcontractor twice a year at each station who BBLP manage and monitor.</p> <p>Any Works identified during inspections is not accounted for within this service cost.</p> <p><i>These are listed and mapped in Appendix C.</i></p>
Revenue Activities	Grill Inspections/Clearance	<p>Drainage Grill Inspections are undertaken by the Delivery Team on a Monthly Rota to ensure their integrity and efficiency.</p> <p>In addition to this Grills are reviewed pre and post severe weather events (this cost allows for an additional 3 visits to all culverts in year)</p> <p>Where clearing is required this is completed at time of the inspection.</p>

<p>Homms Road Telemetry System</p>	<p>Installation of a Telemetry System at Homs Road Car Park pumping station. This is a remote communications system to inform the operational status of the equipment and raise alerts should issues arise. Outputs from the Telemetry will be issued to Duty Offices through a generic email address.</p>
<p>Yazor Brook Telemetry and Maintenance</p>	<p>Ongoing Interpretation of Yazor Brook FAS Flow Data. Cleansing and Inspection of Flow Monitors and Gauges. Installation of a Plate at Yazor to allow visual verification of recorded water level probe data.</p>
<p>Flooding Investigations (Section 19), Flood Risk Management & Flood Studies</p>	<p>This relates to undertaking the provision of technical support to the Lead Local Flood Authority (LLFA). This budget allows for one Section 19 report.</p>
<p>Land Drainage / Riparian Enquiries/Landowner and other body (e.g. network rail) Asset Inspections/Water Course Consenting</p>	<p>This activity is in relation to the Drainage Asset Management Team responding to land drainage enquires, originating both from HC and other parties and progressing issues towards resolution. These enquiries require interaction with 3rd Party (landowners, network rail etc). This item also covers Providing consents by the Drainage Asset Management Team, for working in ordinary watercourses</p>

	Network Encroachments	An amount of £3,490.35 is allocated for the Asset Management Team to aid HC in resolving legacy issues associated with planning permissions and the network. This amount is allocated on historical experience. Change control would be enacted should in-year costs be unexpectedly higher.
Routine Reactive	Routine Reactive Drainage Maintenance	Reactive and Routine Drainage includes: <ul style="list-style-type: none"> - Routine Gully Cleansing - Reactive Drainage Gully Cleansing - Annual Plan Ditching and Grips (North and South)
	Annual Cleansing	This reactive cost item is for Culvert and Water course Cleansing/unblocking identified following culvert inspections and enquiries.
	Rotary Ditcher	Planned Programme of Mechanical Ditch clearing works across the Herefordshire Network
	Water Course Clearance HC Land	Undertaking reactive clearance of HC Water Courses as requested
Flood Risk Management Revenue	Development Control: Planning Flooding Advice	This allows for the Asset Management Team to undertake responses to technical reviews and flooding risk commentary to planning applications.

	<p>Review and Updating Flood Risk Management Strategy</p>	<p>The Local Flood Risk Management Strategy has an Action Plan that runs from 2016 to 2022. We therefore need to revisit this in 2022.</p>
	<p>Hydraulic Modelling Data</p>	<p>This is an Open Order for Provision of Model data to developers and consultants When developers approach the council, BBLP will respond as appropriate The Yazor and Withy Brook models were altered during the ICS project. The changes have resulted in a need for alterations to the format of the Model data output reports. An initial amount is included to invest and prepare these models for packaging to developers.</p>
<p>Externally Funded Services</p>	<p>Property Flood Resilience at Brimfield & Orleton</p>	<p>Survey & implementation of measures of additional properties willing to participate in scheme A business case has been submitted and an EA funding decision is pending</p>

	In year EA/External Funding Opportunities	Seed funding for a single application to EA or other external funding body for potential funding
	Lea Flood Alleviation Scheme	Main Scheme completed in 20/21 Financial Year Works at Brook House may run into 21/22 Financial Year as Legal Agreements are not yet in place to undertake work within the property curtilage

Performance Indicators		
	Indicator	Target
OPIs	OPI 9 Gully Cleansing The percentage of Gully cleanses to planned programme	90%
	OPI 12 Risk Management - Based on the RAG rating for risk where: 1. All Red risks must be reviewed monthly 2. All amber risks every 6 weeks 3. All yellow risks every 2 months	100%
Strategic KPI	Public satisfaction with 'management of road works' – measured through NHT survey - forms part of S15 Customer satisfaction	50%

	<p>OPI 15 Supervisory Checks Percentage of planned supervisory checks carried out in month</p>	85%
	<p>SPI 9 Flood Resilience No of properties at risk of flooding as a result of highway defects</p>	<p>30 Properties lower threshold 45 Properties Upper thresholds</p>

SERVICE OUTCOMES

OUTCOMES	HOW WILL THE OUTCOME BE ACHIEVED
Improved network asset	<ul style="list-style-type: none"> • A risk-based approach to inspection, cyclical and preventative maintenance of highway drainage assets accordance with the HMP and Well Managed Highways. • Utilise the 2012 Highways Maintenance Efficiency Programme (HMEP) Guidance on the management of highway drainage assets approach to managing Highway drainage assets. This guidance will inform the Drainage Lifecycle Plan. • Enhance the drainage records on GIS and augment details held on the Drainage Assets Register in-line with the Drainage Lifecycle Plan
Safer network	<ul style="list-style-type: none"> • Drainage CCTV camera surveys will be carried out in house or by external contractors to determine the conditions of drainage assets that have known issues and asset data will be fed to the TAMP team • By delivering risk ranked capital schemes we will remove flooding from the highway and maintain structural integrity of the assets
Contribution to the local economy	<ul style="list-style-type: none"> • Working with other organisations where applicable secure funding to assist in delivery of other drainage works
Value for money	<ul style="list-style-type: none"> • Disputes with utility companies where highway drainage assets have been damaged or where water is spilling onto the highway, establishing cases where repair costs may be claimed by HC. • Disputes with landowners / insurers to recover costs associated with resolving problems of root ingress within highway drains

Engaged communities	<ul style="list-style-type: none"> Working with the local water authorities, Environment Agency (EA), Parish Councils and land owners to ensure the most effective management of surface water systems and drainage in Herefordshire.
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ASSUMPTIONS

The following assumptions have been made:

- i) Where HC has a legislative or regulatory duty to act and works are required that are outside of the annual plan, then HC will seek to recover these costs and increase the contract's budget accordingly. Should these costs not be fully or partially recovered and have to be funded out of the public realm contract then the level of service described in this annual plan will reduce.
- ii) Assessments have been made based on the current asset data and incident knowledge
- iii) Planning advice is included in this annex but funded via Planning Services rather than Highways.
- iv) The recommendations made in the SFRA and the Preliminary Flood Risk Assessment (PFRA), 2011 remain valid. These will be augmented by further recommendations arising from the Local Flood Risk Management Strategy.
- v) The condition of the network will not deteriorate at a faster rate than prior years.
- vi) Hereford Council will seek to recover the costs associated with works required to be undertaken due to their legislative duties that were caused or are the fault of third parties. A process is in place.
- vii) Extreme weather events do occur in year, which would require resources to be diverted from identified services and cause delay to these and the maintenance programme.
- viii) Legal advice for issues associated with Drainage and will be freely provided by HC. Land & Planning fees are to be charged without BBLP fee.
- ix) HC will continue to be responsible for undertaking inspections of soak away tests for new adoptions under S38 highway drainage.
- x) No allowance has been made for monitoring soak away tests on private developments

OUR COMMITMENTS FOR 2021



Customer Focus First is our strategy, it is built on three pillars: Customer Focus, Construction Excellence and Innovation, all of which sit within a framework of safety first.

For 2021/22 we will make the following commitments to deliver tangible, positive outcomes to our customers, local communities, the public and our employees.

Customer Focus Aim: Do the right kind of business, exceed our customers’ expectations, always deliver certainty and ‘Get Left’ through early engagement



- Talk Openly and Engage regularly with the Annex Champions
- Plan effectively to deliver the best possible service & value for money.
- Celebrate success with HC and Annex Champions
- Share knowledge & expertise from the wider stakeholder Group to continuously improve the service for HC

Construction Excellence Aim: Create expert teams that deliver exemplar performance, empower our people to drive continuous improvement, be a trusted provider and engage with best in class partners



- Always put Safety and Zero Harm first
- Ensure we train, retain and recruit the best people
- Create high performing teams
- Promote ideas through My contribution from all levels of the operation

Innovation Aim: Deliver our 20 by 2025 commitments, motivate and upskill our people to use technology and innovate, and use data to inform improved decision making



- Utilise the correct and best equipment for the job
- Explore areas of innovation that can reduce our carbon footprint
- Explore efficiency improvements through technological advances
- Ensure highways data is captured efficiently and shared with the wider team

Zero Harm Safety is our license to operate



- Promote the use of Observations throughout the team
- Deliver our 2021 Zero Harm Calendar accordingly
- Encourage open discussions about safety within the operation
- Engage and promote safety through our supply chain of sub-contractors

THE SERVICE

SERVICE SCOPE

SERVICE	SCOPE
<p>Asset Management</p>	<p>IN SCOPE</p> <ul style="list-style-type: none"> • Work with the TAMP and Operations team to optimise highway drainage inspections and maintenance. Utilise a risk-based approach to select which assets can be inspected within funding constraints • Maintain a forward programme of known defects that have been scoped, risk assessed and prioritised based on the scoring methodology outline in the Appendix of this Annual Plan. • Manage the network in accordance with HMEP Guidance on the Management of Highway Drainage Assets. This guidance will inform the Drainage Lifecycle Plan. • Maintain and continue to enhance the drainage records on GIS and AMX/Confirm systems. Databases are updated by operatives undertaking inspections • Development of an Annual Plan of capital schemes selected from the forward programme of known defects. • Leading the resolution of legacy drainage issues, such as planning or construction problems (e.g. Rose Gardens). • Survey work to facilitate disputes with insurance companies • Review drainage asset inventory data and update inspection and maintenance schedules, using hand-held GIS sets. • Record drainage defects and identify routine maintenance priorities. <p>NOT IN SCOPE</p> <ul style="list-style-type: none"> • Asset Management techniques such as deterioration curves, future prediction of condition.

<p>Highway Drainage – Capital and Revenue</p>	<p>IN SCOPE</p> <p>Work with TAMP team to implement the established value management process for annual highway drainage scheme programme based on HMEP Guidance on the management of highway drainage assets 2012.</p> <p>In accordance with the Drainage Assets Lifecycle Plan, utilise a risk-based approach to selectively carryout preventative/cyclical maintenance of high-risk assets and a reactive approach to maintaining low risk assets.</p> <ul style="list-style-type: none"> • Reactive response to highway flooding incidents. Following review for cost/benefit and prioritisation, our team will carry out one-off land drainage works to alleviate communities affected by flooding issues where resolution of land drainage issues has been exhaustive, and it has been agreed with HC that enforcement is not to be taken. <p>Highway/HC owned ditch and grip clearance delivered through the Locality Teams and reported into TAMP team.</p> <p>Issues logged on CONFIRM will form a raw list of drainage issues. The Locality Teams will assist in resolving initial sift of entries, key issues will be brought forward onto a Drainage Tracker. Undertaken planned capital maintenance works to reduce the risk in the network and repair cat 2b defects</p> <p>Management of drainage inventory data which will inform the development of the highway drainage maintenance strategy. Asset data will be captured in the field using GIS Tablets, e.g. gully pot locations will thus be plotted and referenced with condition grade (depth of silt in gullies).</p> <p>Reviews will take place of ‘hot spots’ with wet skid accidents or flooding incidents criteria identified, which may be scheduled for gully/ grip clearance. Potential sites are escalated to the asset management team for review and prioritised for action. CONFIRM data management system utilised to allow refinement of the gully cleansing programme and help plan the routine maintenance of highway drainage assets. Return times for cleansing devised on a trial basis dependant on a risk-based approach. Data from reactive gully cleansing works will be utilised and the results refined by means of a flood risk assessment, for inclusion in the cyclic programme.</p> <p>Reviews will take place after ‘hot spots’ with wet skid accidents or flooding incidents criteria have been identified, which may be listed for gully/grip cleansing. Potential sites are escalated to the asset management team for review and prioritised for action.</p> <p>The ditching and grip cleansing programme will be extended to include the unknown network, where no current asset data is held on grip locations. Locations will be prioritised based on asset data collected to inform future programmes of work.</p>
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Land Drainage - Revenue

IN SCOPE

Land Drainage Consenting, enforcement and maintenance on behalf of HC, including:

- Exercise the duties and powers through the legislation on behalf of HC under the Land Drainage act 1991 including recording and managing consent applications, dealing with stakeholders regarding any land drainage issues within the county, in accordance with approved protocols.
- Management of drainage ditches and watercourses where HC are the riparian owner, or where the duty for maintenance has been demonstrated to rest with HC.
- Technical advice to HC Legal Team regarding the interpretation and legal action enforcement of Land Drainage Law will be addressed, some of these are between third parties but landowners have prompted involvement by BBLP.
- Routine and reactive maintenance of HC land drainage assets, grill and ditch clearance, including response to flooding incidents delivered through the Locality and Operations Teams.
- Dialogue with riparian owners to facilitate watercourse and ditch improvements under the Land Drainage Act, including the use of the HC website and approved leaflets.
- Management of land drainage asset data will inform the development of the land drainage maintenance strategy. Lengths of HC maintained watercourses, ditches and grills will be added to GIS.
- The CONFIRM and AMX data management systems will support the delivery of routine ditch and grill clearance and maintenance of land drainage assets, including assistance in any emergency or flooding incidents.

NOT IN SCOPE

Undertaking drainage maintenance work that is the responsibility of Riparian Landowners, unless instructed to by HC to ensure HC’s statutory duties are fore filled. This is documented in a separate stand-alone process.

<p>Flood Risk Management & Flood Alleviation</p>	<p>IN SCOPE</p> <ul style="list-style-type: none"> • Working with the local water companies, Flood Groups, EA, IDBs, Parish Councils and land owners to ensure the most effective management of surface water systems and land drainage (including ditches, ordinary watercourses, grips, gouts and inlets) in Herefordshire. • Where appropriate, investigate incidents of flooding in accordance with Section 19 of the Flood & Water Management Act (FWMA) 2010 and HC’s Flood Investigation Policy. • Collating records of flooding incidents, including information obtained during the recovery phase. • Representing HC at quarterly meetings with the EA and other neighbouring LLFAs. Communications with residents, local flood groups, Parish Councils and Ward Councillors regarding specific flooding studies. • Provide the EA with regular project updates for grant funded schemes as required by the conditions of a grant. • maintain within AMX of a register of structures or features which are likely to have a significant effect on a flood risk in accordance with Section 21 of the FWMA 2010 • Development Control: Technical advice to HC’s Planning Team on planning applications. (To be funded via planning.) A Drainage Engineer will be employed in Hereford to complete drainage planning reviews on small scale developments • Provision of Hydraulic Modelling data to developers and consultants. HC intend to allocate a budget towards this service and recover charges from ad-hoc enquiries from developers and consultants. <p>NOT IN SCOPE</p> <ul style="list-style-type: none"> • Drainage staff regularly attending parish flooding group meetings. (Due to their number and usual timings out of hours, key groups are often attended by Locality Stewards). • Undertaking Flooding Investigations that are not categorised as high enough impact to require investigation, in accordance with Flood Investigation Guidance document.
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RISK MANAGEMENT

High level risks will be managed through the Partnership risk management process and listed on the partnership risk register.

KEY RISK	CAUSE	CONSEQUENCE	MITIGATION
<p>Ice accumulation on the highway network</p>	<p>Unable to see all drainage defects until they arise in extreme weather.</p> <p>Large backlog of Cat. 2c defects on the network and budget to address issues is constrained.</p>	<p>Risk to highway users</p>	<p>Prioritise maintenance investment to high risk areas and defects that could affect safety of highway users. Measure and report on risk in the network through winter risk management process. Please see Winter service plan for more information</p>
<p>Property flooding from highway</p>	<p>Large backlog of defects on the network and budget to address issues is constrained</p>	<p>Complaints and insurance claims</p> <p>Vulnerable individuals are isolated</p>	<p>Prioritise capital schemes based on HMEP guidelines for value management processing. Risk based process to be followed.</p>
<p>EA Grant Application process or commercial restrictions</p> <p>(Contractors need to obtain Gold Status on Construction Line)</p>	<p>Requirements significantly alter or requirements become more onerous.</p> <p>Procurement difficulties</p>	<p>Predicted resource requirements for applications are insufficient.</p> <p>Grant not spent</p>	<p>Staff keeping abreast of sector developments and in regular contact with EA.</p> <p>Early dialogue with contractor and EA.</p> <p>HC to support grant applications</p>
<p>SUDs: major future liability relating to new developments using SUDs</p>	<p>Should developments deviate from requirements of SUDs Manual.</p>	<p>Inconsistent private development approach that is likely to lead to a major maintenance burden for HC in the future</p>	<p>Local SUDs Handbook and any necessary updates following review or change in national approach</p>
<p>Development/ Planning approvals: Increased development</p>	<p>Major increase in applications due to economic cycle and changes in planning regulations</p>	<p>Increase in demand on time of limited drainage team.</p>	<p>Risks of flooding from increased number of domestic and commercial developments</p>

			Additional resource may be required.
Development/ Planning approvals: Water flow paths	<p>New flow path for water generated as a result of development.</p> <p>Alternatively, existing flow path of water is not established prior to development.</p>	<p>Adjacent landowners or future development is affected by water flow, causing flooding</p>	<p>Ability to call upon additional professional resources from third party consultants and our supply chain.</p> <p>Level of scrutiny needs to be enough to cover all significant design risks.</p> <p>Use of locally based staff</p>
Development/ Planning approvals: Wrong Build	<p>Developer builds drainage out of compliance with approved design, either to save money or because key issues are missed during design.</p>	<p>Flooding problem arises, not reported within 8-year window because critical storm does not occur. Developer may be legally entitled to avoid requests to rectify defect. Developer could go bankrupt within this time window.</p> <p>In some cases, adjacent development could be affected</p>	<p>No budget is allocated to mitigate this risk</p>
Projects delivered late, over budget and developed to a poor quality	<p>Major constraints arising during the project.</p>	<p>Delays.</p> <p>Stakeholder frustration.</p>	<p>Use of qualified Prince2 trained project managers to oversee delivery to programme, with regular progress meetings to ensure delivery issues are raised early and required actions are implemented to ensure on time delivery, with requisite quality and within budget.</p>

<p>Lack of funding</p>	<p>Constrained budget</p>	<p>Acceleration of carriageway deterioration by 10-15% pa which equates in value to £1-1.5m per year.</p> <p>Increase in reactive maintenance</p>	<p>HC to consider additional budget.</p>
<p>Increased number of flooding incidents</p>	<p>Extreme Weather.</p> <p>Unable to monitor key assets sufficiently closely to identify maintenance need, leading to unidentified maintenance failing prior to weather event.</p> <p>Constrained resources to address defects.</p>	<p>Resources diverted to help address issues, impacting on rest of service.</p>	<p>Review of Flood Risk Management Strategy throughout contract period amending response to incidents and priorities for funding. Production of Climate Adaptation Plan for the contract.</p>
<p>Illicit connections to highway drainage</p>	<p>Developers connecting, no control over approved works</p>	<p>Existing network is inundated, meaning it cannot accommodate highway water</p>	<p>Where illicit connections are detected, HCC will be informed and BBLP will provide engineering detail should HCC pursue legal proceedings.</p>
<p>Lack of external funding streams</p>	<p>Change to EA policy</p>	<p>Unable to proceed with flood risk schemes.</p> <p>Disappointed stakeholders.</p>	<p>Inability to fund flood prevention works</p>
<p>Failure of recently adopted soakaways/ drainage systems</p>	<p>Poor design/build quality</p> <p>Lack of inspection (soakaway tests) during construction.</p>	<p>Flooding problem arises, not reported within 8-year window because critical storm does not occur.</p> <p>Developer may be legally entitled to avoid requests to rectify defect.</p> <p>Developer could go</p>	<p>HC to undertake inspections on S38 Highway Adoptions and follow adequate adoption procedures.</p> <p>No provision exists for private soakaways, these form the majority</p>

		bankrupt within this time window.	
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PART 2

ROLES AND RESPONSIBILITIES

Job Role	Responsibility
Asset Management Team Leader	To lead the Asset Management Team in the delivery of the team functions and requirements including maintenance of HC’s Highway drainage assets. Development of systems and process to enable improved service and productivity, i.e. implementation of an Asset Management approach. Filling in for Senior Drainage Engineer when he is on annual leave or unavailable.
Senior Drainage Engineer	Management and delivery of the Annual Drainage & Flooding programme, prioritising schemes with TAMP team, lead the development of flooding schemes, feasibility designs, approval of detailed design for minor drainage schemes as required. Respond to Task and Finish Group required actions. Liaise with Highway Capital Maintenance team and TAMP with regards to existing data and proposed highway surfacing scheme proposals. Work with HC to resolve Wrong Building issues. Project Management of external consultants. Investigation of major flooding issues. Coordination with of statutory bodies. Delivery of odd-additionally instructed works. Review of technician’s investigations and proposals for solutions/schemes.
Graduate Drainage Engineer	Provision of support to Senior Drainage Engineer by development of feasibility and detailed design for minor drainage schemes as required. Reviewing Planning Applications and providing flood risk and drainage comments to HC Planning Officers. Liaison with other Councils to ensure best practice regarding Suds and S38 adoptions can proceed.
Drainage Technician – Design	Provision of support to Drainage Engineer by development of feasibility and detailed design for minor drainage schemes as required. Carrying out CCTV camera surveys with operations team and liaising with asset management team in providing recorded asset information. Asset inspections.

Drainage Technician - Field	Responding to enquiries relating to Land and Highway Drainage, including defects, 3rd party issues and consenting. Development of provisional solutions to defects. Liaison with Riparian Landowners, statutory undertakers and third parties to resolve drainage related issues. Carrying out CCTV camera surveys with operations team and liaise with TAMP team in providing recorded asset information.
Engineer Highways	Liaise with TAMP and Drainage team with regards to existing drainage asset data and proposed surfacing scheme proposals.
GIS Technician	Part Time support to the Drainage Team approx. 25%. Maintenance and development of Drainage Asset Database on GIS and AMX/Confirm. Update records for adoptions and surveyed drainage information. Development of maintenance regimes for critical assets.
Locality Stewards	Liaison with Riparian land owners and Parish Councils regarding enquiries, reporting scheme progress and escalating drainage issues to the Drainage team.
Operations Manager – North Drainage	Management of the Drainage Routine and Reactive functions delivered on contract
Routine & Reactive Drainage Supervisor	To plan and supervise the routine gully cleansing operation as well as reactive jetting & ditching and grip cutting county wide.
Operations Teams (Work Gangs)	Delivery of routine and reactive highways drainage maintenance undertaken by in-house gangs including gully emptying, ditching, pipe and culvert clearance and investigatory works including flood incidences and jetting works whilst CCTV camera surveys are being carried out. Under direction of the Drainage Construction Supervisor undertake capital drainage improvement and repair schemes.
Design and Build	Project Management, Design and Delivery of capital schemes using in house resource and/or supervision of external resource.

KEY DELIVERY INTERFACES

	Who are the dependencies	What is their role
Public Realm BBLP Partnership	Public Realm Management Team	Agreeing budgets, procedures etc.
	Locality Teams	Routine drainage and emergency situations.
	Communication and Customer Services Team	Communications with customers
	Performance & Improvement Manager	On-going feedback/ review of service performance

	Routine and Reactive Drainage	Providing ongoing Annual Cleansing of gullies, grips and HC Ditches
	Design and Build	Undertake the Project Management, Design and Build where appropriate of Capital Drainage Works, in addition to supporting Routine and Reactive Drainage when necessary.
Herefordshire Council	Task and Finish Group	Highway Flooding incidence follow up
	HC Legal Services	Liaison for enforcement and formal notices
	Contact Centre	Customer enquiries & response updates
	HC Planning	Advice involving highway drainage and developments
	Local Members	Councillors and Cabinet Member kept abreast of local highway drainage issues
	General Scrutiny Committee	Report back annually re: LFRMS Update on LFRMS Action Plan
External Organisations	Police	Emergency Response
	Environment Agency	Flooding, water course contamination, Flood & Water Management and climate change
	Water Authorities: – Welsh Water Severn & Trent Water	Surface water drainage infrastructure, Farm Herefordshire, Flood & Water Management liaison
	Parish and Town Councils	Community liaison
	Neighbouring local authorities	Coordination of Strategic Flood Strategies & Flood & Water Management
	Land Owners	Enforcement of riparian drainage rights, land drainage, protection of drainage easements
	Natural England	Environment protection - High level support and advisory service
	IDBs	Surface water drainage infrastructure, Flood & Water Management liaison

APPENDICES

APPENDIX A: POLICY & PROCESSES

PROCESSES

The policy and processes that will be utilised in delivery this service is outlined in the TAMP, HMP, Drainage Lifecycle Plan and Drainage Quality Plan.

The prioritisation scoring methodology that will be utilised to select schemes for the Annual Plan will be as follows:

Note: the impact of the defect should be considered based on all seasons. I.e. if a drain is blocked and it is assessed in a dry period, the impact of defect in a wet period should be considered. Please see other documents referenced in the paragraph above for more information.

Risk & Impact Scoring, max score: 100

Drainage Safety	Points	
Confirmed accident due to/exacerbated by defect	40	
Defect likely to result in high risk of accident or report of safety issue from Emergency Services	25	
Other minor safety issues	10	
No Safety Issues	0	
Sub-total:	/40	

Structural Stability	Points	
Defect causing instability of HC or 3 rd Party Asset – instability imminent or already failed. Indications of failure mechanism are evident. Or Defect leads to permanent road closure	25	
Defect causing instability of HC or 3 rd Party Asset – instability likely in medium term (1yr). Asset remains fully functional.	10	
Defect not causing instability	0	
Sub-total:	/25	

Highway Impact	Points	
A Roads or Main distributor B Roads	10	
B Roads	7	
C Roads	5	
Unclassified Roads	2	
Score	/10	

Property Flooding	Points	
Internal Property Flood or any Foul Flood	25	
Business impacted by Flooding	15	
Multiple External Property Floods	10	
Single External Property Flood	5	
Sub-total:	/25	

Drainage Prioritisation Value Management Scoring

For Category 2 defects the Asset Management team will review the Locality Steward's risk assessment and apply the following additional considerations, to develop a max score out of 100:

Social & Economic	Points	
Flooding in vicinity of Critical Services or Infrastructure e.g. schools or hospitals. Potential for loss of outstanding legal claim.	+15	
Critical route affected within urban area, part of strategic network or vital community link	+10	
Complete flooding or splashing of footways near property	+10	

Deliverability	Points	
Low value works (£3k) or simplistic scheme	+5	
Requires excavation in carriageway that's had surfacing works carried out in the last 3 years	-15	
Requires excavation in soon to be surfaced carriageway	+20	
Environmental Constraints	-10	
Positive Vocal Stakeholder Engagement / Public Demand for the Scheme	+5	
Significant traffic disruption likely due to remedial works	-5	
Excessive Cost vs. Value	-20	
Sustainability of Solution – Low	-10	
Accessibility for Land Drainage works – constraints present	-5	

Whole Life Costing	Points	
Change in drainage asset will result in increased maintenance burden	-5	
No change in maintenance requirements	0	
Change in drainage asset will result in decreased maintenance burden	+5	

APPENDIX B: REFERENCE DOCUMENTS

- Highways Act 1980
- Land Drainage Act 1991 & 1994
- Flood Risk Regulations 2009
- FWMA 2010
- HMEP Guidance on the management of Highway Drainage Assets 2012
- Common Law
- Highway Maintenance Plan
- UK roads Liaison Group Highway Maintenance Efficiency Programme Infrastructure Asset Management Guidance Documents
- HC's Drainage Lifecycle Plan
- HC's Highway Maintenance Plan
- CIRIA C697 SUDS Manual
- CIPFA latest guidelines
- Drainage Standards Policy

- Public Realm Specification
- SFRA (2009)
- PFRA (2011)
- Local Flood Risk Management Strategy
- Flood Study reports
- Herefordshire Flood alleviation Strategy
- Well-maintained Highways Code of Practice

APPENDIX C: PROGRAMME OF WORKS



Appendix C Drainage
Capital Schemes 2021



Appendix C Drainage
Inspections for 2021-