

# HEREFORDSHIRE PUBLIC REALM CONTRACT 2020/21

## ANNEX 13 – STREET LIGHTING AND TRAFFIC SIGNALS

### SERVICE OVERVIEW

SERVICE SUMMARY		
		Output
Capital Activities	Inspections Asset Management Planned Maintenance	Maintain Inspections of Stock Condition and Asset Management
	Capital Improvement	Renew Stock, where required, to include, light columns, lanterns, bollards, illuminated signs.
	Programmed Traffic Signals works	Undertaking inspections and planning renewals associated with Traffic Signals
	Maintenance of Traffic Signals and Controls	Maintenance contract with Telent to maintain traffic signals through county
	New Loops and Inspection pits at Commercial Square Hereford	New connections, new loop extensions and minor alterations
	Upgrades to Traffic Signals and controls resulting from Maintenance inspections and Replacement Loops etc	Works resulting from Inspections of Traffic Signals and Loops requiring replacement
	Non-Refundable Green Claim Third Party Damage	Where no third-party details are available/given replacement of Asset will be required

	LTP Monitoring Traffic Data Collection	County Journey Information along with minor renewals and improvement to equipment
	SCOOT Maintenance Countywide	Maintenance of the system throughout areas in county
	Provisional Sum for Maintenance Contract with Telent associated with CLR	Maintenance of the CLR Signals
	Victoria Bridge	Undertaking a Bridge Closure so as to then undertake an inspection of the street lighting assets and feeds, using third party Abseiling Company, under direction of Street Lighting Supervisor to locate fault/faults. Fault/Faults to either be repaired in one visit or maybe a plan to undertake a second visit.
	VAS for Safety Routes to Schools	This is a provisional sum to undertake replacement/rectification of 5 Locations in county
	Maintenance contract for remote access to overhead vehicle detection systems	Maintenance agreement for 3 Overhead Signs per annum
Revenue Activities	Power Data Associates	Payment of the Annual Fee associated with Power usage calculation for HC Electrical Street Furniture in a year
	Reactive response service across Herefordshire for <b>Street Lighting</b> Reactive and Emergency Works	Specification outlined in Appendix A, Reactive Maintenance Schedule  Specification outlined in Appendix B, Routine Maintenance Schedule

	Reactive response service across Herefordshire for <b>Traffic Signals</b> Emergency Works	Maintain Visual, Structural, Electrical Performance, Tree management
	Hereford Promotional Activity to install Banners on Street Lights	Installations as per the request of HC.

Performance Indicators		
	Indicator	Target
OPIs	<b>OPI -3 Street Light Faults</b> Percentage of Street Lighting Defects repaired within 5 days from the Time of Notification	98%
OPIs	<b>OPI 12 Risk Management</b> - Based on the RAG rating for risk where: <ol style="list-style-type: none"> <li>1. All Red risks must be reviewed monthly</li> <li>2. All amber risks every 6 weeks</li> <li>3. All yellow risks every 2 months</li> </ol> <b>OPI-15 Supervisory Checks</b> Percentage of planned supervisory checks carried out in month	100%  85%
Strategic KPI	<b>Public satisfaction with 'management of road works'</b> – measured through NHT survey - forms part of S15 Customer satisfaction	50%

**SERVICE OUTCOMES**

OUTCOMES	HOW WILL THE OUTCOME BE ACHIEVED
Improved network asset	<ul style="list-style-type: none"> <li>- The asset management approach will continue in 2020/21 utilising operational staff to undertake condition inspections, electrical and structural testing, in addition to their inspection, reactive and planned maintenance duties.</li> <li>- The street lighting asset management system will continue to be run on AMX, to enable Lifecycle Planning and compliance</li> <li>- Adoption of Third Party Assets and newly Constructed HC Works into the Asset Database</li> </ul>
Safer network	<ul style="list-style-type: none"> <li>- Repairing SL &amp; TM assets in line with agreed timescales to maintain a safe network</li> <li>- Within budgetary constraints, cleaning of signs, bollards and vegetation clearance. Frequency TBC.</li> <li>- Contribute to the Free Flow of Traffic (Traffic Management Act)</li> </ul>
Sustainable delivery	<ul style="list-style-type: none"> <li>- Prioritising planned maintenance based on AMX Life Cycle Management</li> </ul>
Value for money	<ul style="list-style-type: none"> <li>- Maintaining new Led lighting and replacing to LED assets where necessary, contributing to the continued drive in energy reduction and cost efficiency</li> </ul>

**ASSUMPTIONS**

- Suppliers equipment will be readily available and delivered within reasonable timescales.
- BBLP has not included for any Property Services Street Lighting and Electrical Street Furniture Adoptions/ Upgrades to allow alignment with HC Assets.
- No significant deterioration of the asset is expected above and beyond the past deterioration rates over the past three years.

**THE SERVICE**

**SERVICE DELIVERY**

	SERVICE	RESOURCE	DELIVERY
<b>Capital Activities</b>	<b>Street Lighting Capital Activities</b> Inspections, Asset Management, Planned Maintenance	Delivery Street Lighting Team	Programmed throughout the year form AMX
	Capital Improvement Works	Delivery Street Lighting Team	Programmed throughout the year following inspections and other defined work stream which identifies need
	Programmed Traffic Signals works	Delivery Street Lighting Team	Undertaking inspections and planning renewals associated with Traffic Signals
	Maintenance of Traffic Signals and Controls	Delivery Street Lighting Team	Maintenance contract with Telent to maintain traffic signals through county
	New Loops and Inspection pits at Commercial Square Hereford	Delivery Street Lighting Team and Sub Contractor	New connections, new loop extensions and minor alterations
	Upgrades to Traffic Signals and controls resulting from Maintenance inspections and Replacement Loops etc	Sub Contract Managed through Street Lighting Team	Works resulting from Inspections of Traffic Signals and Loops requiring replacement
	Non-Refundable Green Claim Third Party Damage	Delivery Street Lighting Team	Where no third-party details are available/given replacement of Asset will be required
	LTP Monitoring Traffic Data Collection	Design and Build Project Management	County Journey Information along with minor renewals and improvement to equipment
	SCOOT Maintenance Countywide	Sub Contract Managed through Street Lighting Team	Maintenance of the system throughout areas in county

	Provisional Sum for Maintenance Contract with Telent associated with CLR	Sub Contract Managed through Street Lighting Team	Maintenance of the CLR Signals
	Victoria Bridge	Street Light Team and Sub Contract	Undertaking a Bridge Closure so as to then undertake an inspection of the street lighting assets and feeds, using third party Abseiling Company, under direction of Street Lighting Supervisor to locate fault/faults. Fault/Faults to either be repaired in one visit or maybe a plan to undertake a second visit
	VAS for Safety Routes to Schools	Street Light Team and Sub Contract	This is a provisional sum to undertake replacement/rectification of 5 Locations in county
	Maintenance contract for remote access to overhead vehicle detection systems	Sub Contract	Maintenance agreement for 3 Overhead Signs per annum
<b>Reactive</b>	Power Data Associates	Sub Contract	Payment of the Annual Fee associated with Power usage calculation for HC Electrical Street Furniture in a year
	<b>Street Lighting Revenue Activities</b> Reactive response service across Herefordshire for Street Lighting Reactive and Emergency Works	Street Light Team	24 hour service

	<p><b>Traffic Signal Revenue Activities</b>          Reactive response service across Herefordshire for Traffic Signals          Emergency Works</p>	<p>Street Light Team</p>	<p>24 hour service</p>
	<p>Hereford Promotional Activity to install Banners on Street Lights</p>	<p>Street Light Team</p>	<p>Installations as per the request of HC.</p>

**SERVICE SCOPE**

SERVICE	SCOPE
<p><b>Street Lighting:</b> Inspections, Asset Management, Planned Maintenance</p>	<p><b>IN SCOPE</b></p> <ul style="list-style-type: none"> <li>• Identification of asset data requirements and then collection of data during inspections over a six year period (linked to electrical test frequency).</li> <li>• Asset electrical a structural assessment plan</li> <li>• Periodic inspection and testing to BS7671</li> <li>• Visual inspection in accordance with TR22, (inspection schedule to be determined)</li> <li>• Annual Life Cycle Plan review, minor adjustments</li> <li>• Prioritising maintenance based on results of inspections and enquiries</li> <li>• Prioritised programme of capital work for the following financial year.</li> <li>• Only limited support is allowed for SL &amp; TM staff into capital investment programmes</li> </ul> <p><b>NOT IN SCOPE</b></p> <ul style="list-style-type: none"> <li>• Major rewrite or update of associated asset management or inspection documentation.</li> <li>• Night Scout Inspections</li> </ul>
<p><b>Street Lighting:</b> Capital Improvement Works</p>	<p><b>IN SCOPE</b></p> <ul style="list-style-type: none"> <li>• Programmed works will be limited to the statutory testing of street lighting equipment</li> <li>• Identified and funded Section 278 &amp; 38 schemes (funded in Annex 4)</li> <li>• SL &amp; TM funded by highway improvement schemes from other annexes</li> </ul>



<p><b>Traffic Signals:</b> Routine Maintenance of Signals</p>	<p><b>IN SCOPE</b></p> <ul style="list-style-type: none"> <li>• Non-emergency faults to permanent Traffic Signals,</li> <li>• We will deliver the traffic signals element of the service under the supervision of our EIA with street lighting services self-delivered.</li> <li>• All faults will be handled in a manner that delivers the service in accordance with the Service Information document and Baseline Specification</li> <li>• Liaison with Highways England regarding the A49.</li> </ul> <p><b>NOT IN SCOPE</b></p> <ul style="list-style-type: none"> <li>• Major rewrite or update of associated asset management or inspection documentation.</li> </ul>
<p><b>Street Lighting:</b> Reactive response service across Herefordshire.</p>	<p><b>IN SCOPE</b></p> <ul style="list-style-type: none"> <li>• Response to Road Traffic Accidents, Door off Wires exposed (DOWE) and failed equipment i.e. hanging lanterns</li> <li>• A 24 hour reactive response service will be provided across Herefordshire for all street lighting installations.</li> <li>• All faults will be handled in a manner that delivers the service in accordance with the Service Information document and Baseline Specification</li> </ul>
<p><b>Traffic Signals:</b> Reactive Maintenance of Signals</p>	<p><b>IN SCOPE</b></p> <ul style="list-style-type: none"> <li>• A 24 hour reactive response service will be provided across Herefordshire for emergency faults in permanent traffic signals,</li> <li>• Escalation procedure to inform the Traffic Manager of significant impact on the Public Realm (to be developed)</li> <li>• Events management process for effective management of known events impacting on Traffic Control systems (to be developed).</li> <li>• ANPR Camera: process for adding or not</li> <li>• Bollards + rising Bollards</li> </ul>

**RISK MANAGEMENT**

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

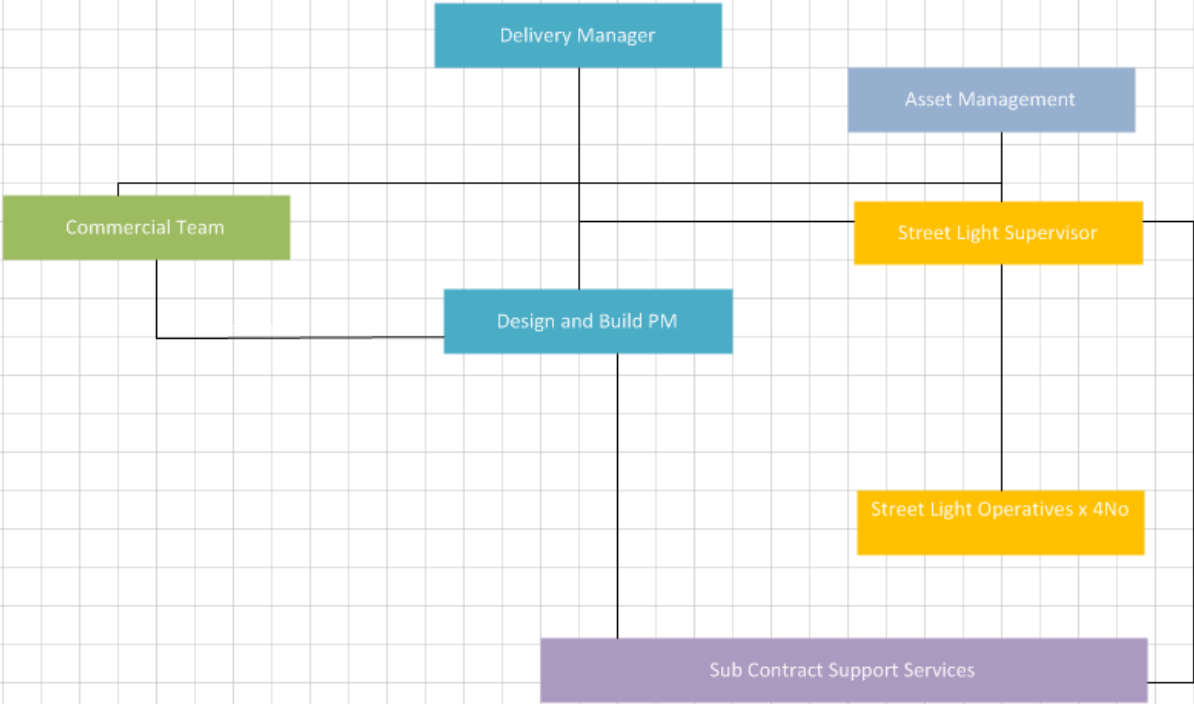
	KEY RISK	CAUSE	CONSEQUENCE	MITIGATION
Strategic Risks	<b>Budget</b>	Reduced Funding from Central Government.  Pressures elsewhere in the service.	Delays to programmed maintenance.	Minimum number of Street Lighting Operatives to deliver the service is deemed to be four to enable emergency rota coverage.
	<b>Works identified are unpopular with some stakeholders</b>	Stakeholders have alternative priorities	Stakeholder dissatisfaction	Specific scheme engagement plans identified. Member briefings provided. Residents informed of works through effective communication and call centre briefed on schemes.

PART 2

**ORGANISATION**

**STRUCTURE**

Street Lighting Structure 2020-2021



**ROLES AND RESPONSIBILITIES**

Job Role	Responsibility
<b>Delivery Team Manager</b>	<p>Ensuring that operational activities are undertaken in a safe and controlled manner in accordance with company policies and procedures.</p> <p>Ensuring resources are capable and have time to undertake the works safely. Commercial accountability for this service area, including budget forecasts, cost monitoring, commissioning and managing 3<sup>rd</sup> party consultants and specialist Sub-contractors.</p> <p>Implementation of HC SL &amp; TS policy. ( Note All Traffic Signals are maintained by BBLP Sub Contractor)</p>
<b>Commercial Team</b>	Provide Strategic Financial Support for all contracted works
<b>Asset Management Technician</b>	<p>Development of the SL &amp; TS data inventory and asset inspection schedule. Coordination of condition surveys, analysis of condition data utilising to enable reporting of condition and valuation statistics.</p> <p>Monitoring the SL &amp; TS energy usage and submission of monthly usage data to the energy supplier.</p>

<p><b>Street Lighting &amp; Traffic Signals Supervisor</b></p>	<p>The management of operatives to ensure the levels of service and inspections are achieved.</p> <p>Coordination and supervision of Specialist SL &amp; TS subcontractors, including the HSQE factors associated with their works.</p> <p>Running the operational TS systems and ensuring its on-going availability.</p> <p>Supporting the Asset Management team in its implementation of an Asset Management approach to the service.</p> <p>Undertaking inspections of the network where investigations are needed or Operatives need cover.</p> <p>Ensure the objectives set out by the Council's are being achieved through the delivery of the public realm service, as budget and changing Council's objectives may require</p> <p>Coordination with the local power distribution network operator (DNO) to agree both electrical connections and disconnections.</p> <p>Responding to incidents that involve traffic signals and to ensure the site remains safe. Also to ensure that all planned and pro-active maintenance is coordinated by liaising directly with the DNO, Telent and Scoot when required.</p>
<p><b>Street Lighting Operatives</b></p>	<p>Undertaking both the reactive make safe repairs and the routine maintenance of the street lighting assets. To undertake the installation of new equipment and apparatus related to new improvements schemes.</p> <p>Undertaking condition assessments and testing of SL &amp; TS assets. Gathering of asset and condition data.</p>

**KEY DELIVERY INTERFACES**

	<b>Who are the dependencies</b>	<b>What is their role</b>
<b>Public Realm BBLP Partnership</b>	NRSA Team	Information regarding Public Utility works
	Locality Manager	Co-ordination of response to emergencies
	Performance & Improvement Manager	Ongoing feedback/ review of service performance
	ITS and Public Realm Asset Team	Database updates and co-ordination with asset and ITS policy
	TAMP Team	Develop a street lighting Whole Lifecycle Cost model for Herefordshire Council to inform the maintenance and improvement programmes.
<b>Herefordshire Council</b>	Local Members	Keeping informed of programmes
	HC Finance	Liaison on electrical supply costs
	HC Legal Services	Formal notices regarding closures, diversions etc.
	HC Traffic Manager	Escalate significant traffic implications from issues with the Traffic Control systems allowing proactive management and communication. Also to agree management requirements for Events impacting on this element of the Public Realm.
	HC Planning – Transportation Team	Planning matters involving street lighting and signals
	HC Waste Management Team	Ensure compliance with WEEE regulations and the HC strategy of waste reduction by recyclability of asset
	HC Contract Centre	Development of clear protocols for handling of emergencies
	HC Development Control Team	New developments and future adoptions
<b>External Organisations</b>	Police and other emergency services	Emergency standby – making safe and general site attendance
	Land owners and businesses	Liaison regarding incidents adjacent to private land/properties
	Highways England	Liaison/Coordination of activities that span local and national road networks
	Neighbouring local authorities	Liaison/Coordination of activities that span local authority borders
	Conservation Area / local centre Representatives	Impact on conservation / district centre areas
	Utility Companies	Effect on underground and overhead services
	Distribution Network Operators	Provision of new electricity supplies & submission of Street Lighting energy accounts
	Power Data Associates	Half Hourly data verification for energy billing
	Parish Councils	For clarity of ownership and energy usage/billing

---

## FOUR YEAR PLAN

---

### INNOVATION AND CONTINUOUS IMPROVEMENT

#### FOUR YEAR PLAN

In 2017/18 we implemented an asset management approach to Street Lighting, which involved developing a forward programme of maintenance works. Due to the recent major investment in lamps and columns, the capital budget required for replacement columns is anticipated to be significantly reduced over the short term.

However, this base level is anticipated to rise gradually over the medium term as the stock ages.

In 2018/19 the AMX system was further developed to improve the mobile inspection functionality and collection of data in the field. We expect to continue to make minor improvements to the system in the coming years to improve efficiency and quality of service.

The asset management approach requires the condition of the network to be established via surveys that occur every 6 years, ie 1/6 of the network (2,500no.) In addition, the inspections will also collect asset data to enable Whole of Government Accounts and asset management analysis of condition to be undertaken. This successfully commenced in 2016/17 and will continue in 2020/21 and beyond

#### TRAFFIC SIGNAL SUPPORT TRANSITION

In 2017 a direct contract with a specialist traffic signal maintenance supplier commenced via Balfour Beatty and the Public Realm Contract.

We will improve service delivery through:

#### ASSET MANAGEMENT

**Asset Management System** – During 2016-17 a major data cleanse and update was undertaken for SL & TS in MAYRISE.

Following a review options for taking the SL & TM maintenance service mobile, it was established that the upgrade of the existing MAYRISE system was not the preferred or best value for money option. Instead structure's AMX system was identified as being a better value system that would provide a superior service. The time and risk associated with setting up a new IT system were also avoided. Preparation for the transfer to AMX started in Jan 2017 and was live in May 2017. This has resulted in a significant improvement in service as our work force will be able to inspect and maintain the asset group with information at the finger tips. Further refinement of the system is expected in 2020-21.

**Whole Life Cost Approach** - will be used to continue to develop and implement the SL & TS Life Cycle Plan for Herefordshire. This will be referenced against our wider knowledge and understanding obtained from BBLP's other street lighting services across the UK and enable us to continuously monitor and benchmark performance and identify any potential for improvements in the service.

**Technological Delivery** – Vehicles and hardware will be GPS enabled to work in tandem with our ICT systems to capture data and inform our methods of working and future maintenance programming and scheduling.

**LED** - Review LED technology benefits for any traffic control systems not yet transferred to LED technology.

---

## WORKFORCE EFFICIENCY

We will continually review workforce objectives and set performance targets that improve the service through LEAN and other similar waste reduction processes. These will include:

**'Day in the Life of' (DILO) Studies** – measuring the inefficiencies through a working day to understand and reduce direct and embedded waste for both reactive and cyclical activities (i.e. knock downs and bulk lamp change and clean activities), thereby reducing cost and raising the productivity levels of the delivery crews.

**Visualisation** – daily reporting of what has gone well and what has not gone well with actions and countermeasures identified to improve performance through visualisation centres.

**Method Statements** – method statements will be reviewed annually to ensure that the procedures employed are compliant with BBLP and current best practice and identify opportunities for improvement.

**Emerging Technology** – emerging technologies will be continually reviewed to determine their suitability to meet the objectives of the Whole Life Cycle model and recommendations made through business cases to Herefordshire Council for agreement.

**Bollard Replacement** – We will continue to replace knocked down illuminated bollards with the more economic plastic reflective bounce back types. This eliminates, power cost and reduced replacement labour and material cost if knocked, due to flexibility of the system.

## INNOVATION

The street lighting sector continues to be an area of development and innovation, particularly in energy reduction and lighting efficiency. We will continue to review innovations through the period of the contract to take advantage where appropriate for Herefordshire to reduce costs.

Other areas of innovation, focused primarily on the production cycle will include:

**Permanent Electrical Connections** – Currently the DNO undertake all electrical connections, and the service is therefore subject to their processes, which can on occasion give rise to inefficiencies in the Herefordshire service. We will review, and if appropriate develop a self-delivery service for all contestable DNO works.



**APPENDICES**

**APPENDIX A: POLICY & PROCESSES**

REACTIVE MAINTENANCE SCHEDULE

	Reactive Maintenance Works Type	Suggested Period for Rectification
Non emergency Fault	Excluding DNO equipment	Five (5) Business Days
	Removal of graffiti	
	twisted attachments, including sign plates and lighting units	
	Unauthorised Attachments	
	Repair Fault on DNO Equipment	Thirty (30) Business Days
	Photometric Performance Failure	
	Structural and Mechanical Failure	Twenty (20) Business Days
	Electrical Inspection and Test Failure	
Urgent Fault	Traffic Signal Point - Lighting Point	One (1) Day, inline with HMP.
	Cabinet door open - no live terminals exposed	
	Removal of offensive graffiti	
	Lighting Columns or Traffic signal post leaning	
	Illuminated bollard shell missing	

## APPENDIX B: REFERENCE DOCUMENTS

### REACTIVE MAINTENANCE SCHEDULE

Routine Maintenance Works	Routine Works		Asset Type	Suggested Frequency	Comment
	Photo performance	-	Street Lights	-	React to stakeholder queries
	Visual Performance		Traffic Signal Points	-	Undertaken by bi-annual inspection
	Structural		Street Lights Traffic Signal Points Illuminated Traffic Signs	-	Combine with Testing inspections
	Electrical		Street Lights Traffic Signal Points Illuminated Traffic Signs	6 yrs.	Demonstrate Compliance with BS7671

### LEGISLATIVE DOCUMENTATION

- Highways Act, 1980; Section 41
- Traffic Management Act 2004 (TMA)
- CDM2015
- BS7671 - IEE Wiring Regulations
- Electricity at Work Regulations
- WAH - Working at height regulations
- Manual handling regulations
- PUWER
- LOLER
- G39
- HSG47
- COSHH
- NRSWA
- TSRGD

### CODES OF PRACTICE

- Street Lighting Code of Practice, 1980; Section 41
- Traffic Signs Regulations, 2002
- Well Lit highways
- BS EN 13201
- I.L.P. Code of Practice for Electrical Safety in Public Lighting Operations
- BSEN 12899

HEREFORDSHIRE COUNCIL DOCUMENTATION

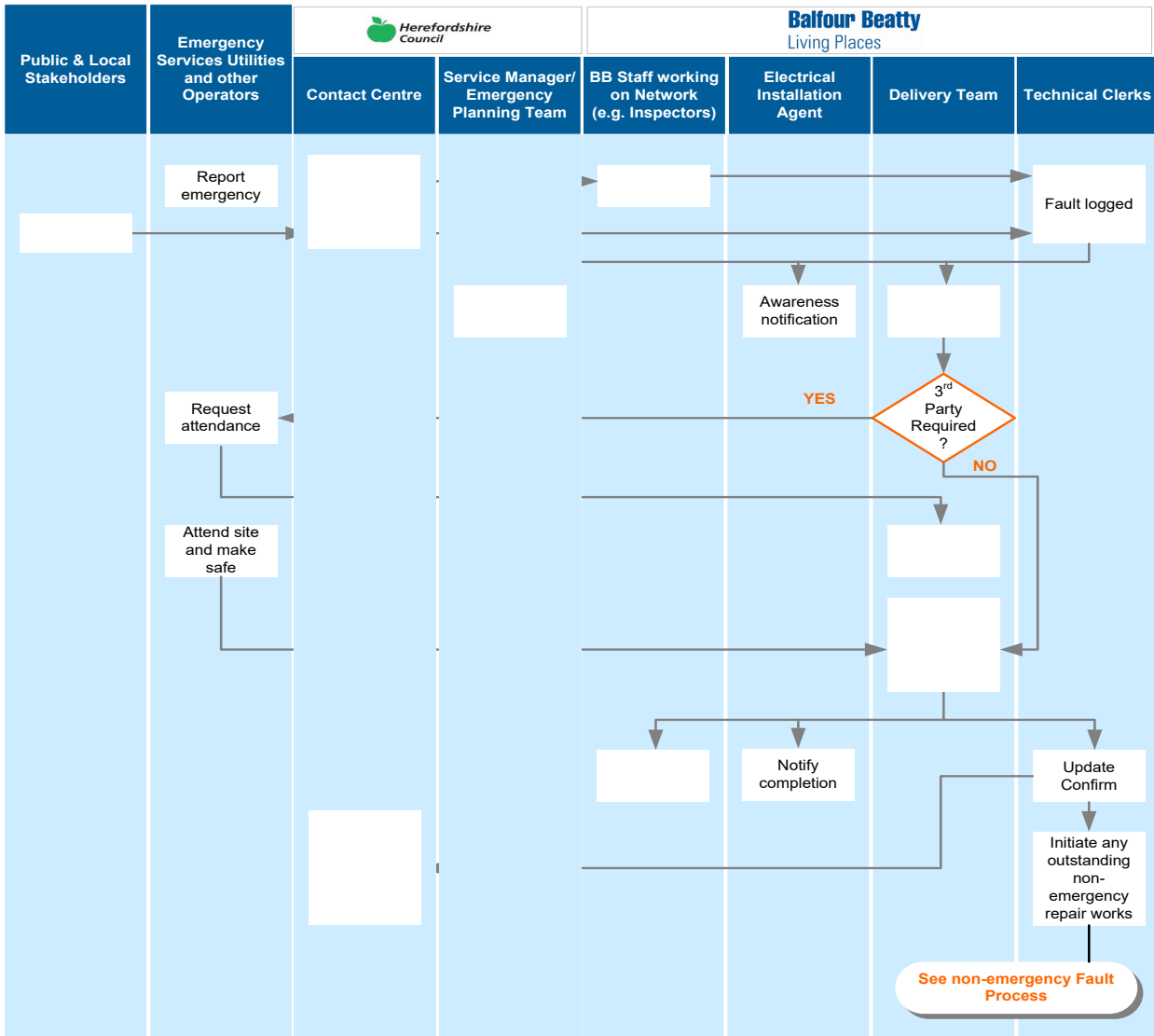
<b>Condition inspection and intervention frequencies (electrical)</b>	
<b>Activity</b>	<b>Specified Frequencies (Every....)</b>
Cyclic Inspections:	6 years
Basic electrical and structural:	6 years
Painting	As required (following annual inspection)
Detailed Structural Testing	As required (following routine structural test reports)

CONTRACT DOCUMENTATION

<b>Response times for electrical defects identified through condition inspections</b>	
<b>Degree of deficiency</b>	<b>Response time</b>
Emergencies	2 hours
Lamps out or other minor faults	5 Working days
Restoration of electrical supply (DNO)	30 Working Days

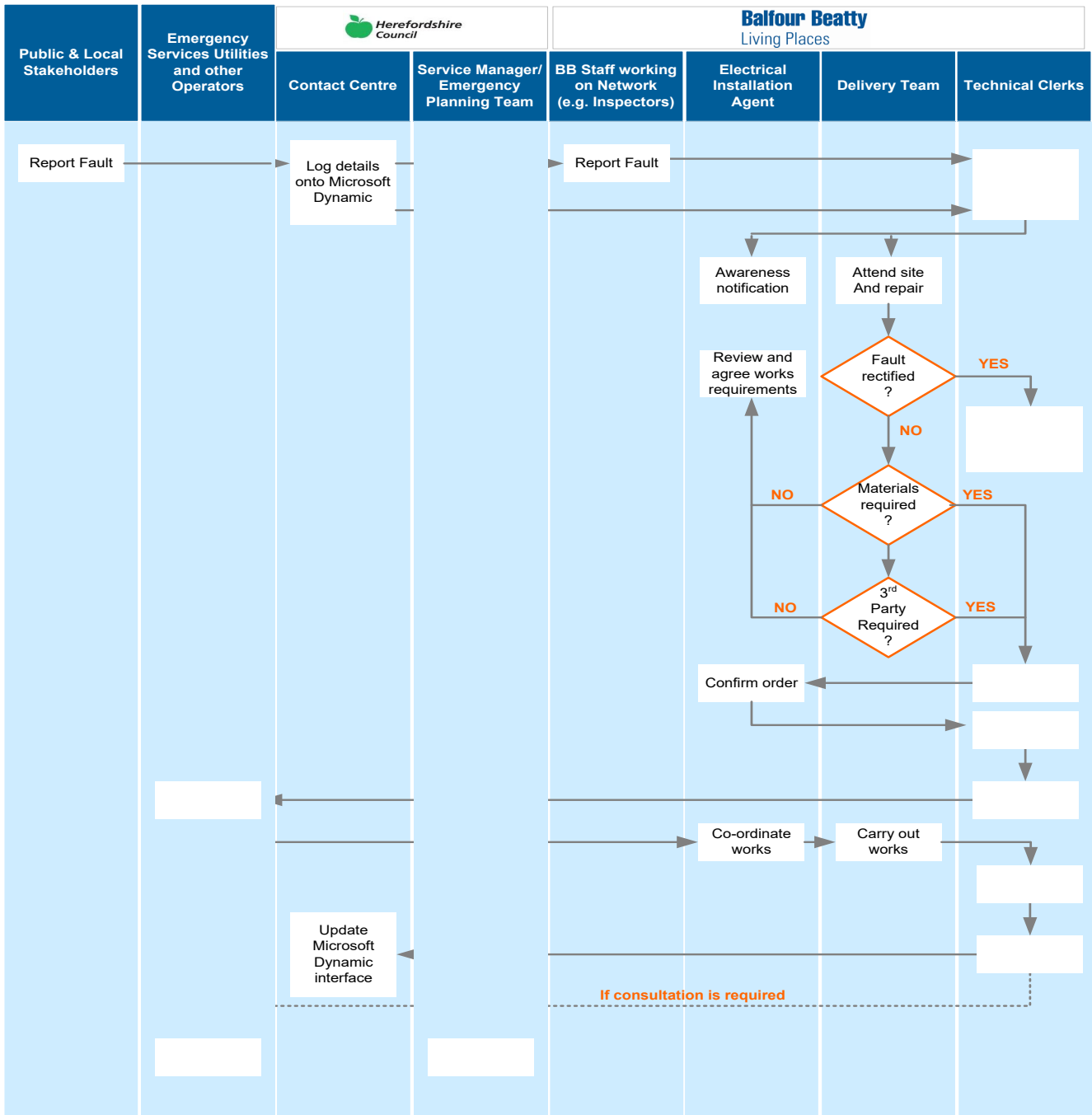
APPENDIX C: DEFINITIONS

Electrical Installations – Emergency Faults





Electrical Installations – Non-emergency Faults



---

## **APPENDIX D: PROGRAMME OF WORKS**

In prior years there has been only a reactive service. This is now moving to an Asset Management approach: developing the knowledge of the asset, its condition and deterioration to enable a prioritised programme to be developed.

Inspections: circa 2,500 (1/6 of the asset) inspected annually