### Flood Risk Management Group Action Plan (March 2017)

### i) "Live" capital projects

### Table 1: Live Capital Projects

Location	Scheme / Works Description	Funding Source	Funding Allocated	Progress	Target Completion Date
Chaceley	Flood relief outfalls	Gloucestershire County Council	£45,000	The EA's new Environmental Permitting regime caused considerable knock on delays but was eventually resolved. However; National Grid placed a very late stop order on works due to a perceived uncertainty in their mapping which they needed to clarify. Work is now underway and due to complete within the next few weeks.	Early 2017
The Grange Field	Diversion of channel to create meandering watercourse with associated wetland and wildflower meadow features.	Tewkesbury Borough Council	£180,000	Working in partnership with EA and Gloucestershire Wildlife Trust (GWT). The detailed design contract has been let and it is expected that the design process should be completed by May 2017. The construction phase will then be put out under separate tender to ensure best value.	Spring 2019

### ii) Tewkesbury Borough Council Programme of Watercourse Maintenance

Tewkesbury Borough Council (TBC) owns various parcels of land across the Borough and some of these have watercourses either running through them or adjacent to them. This means that Tewkesbury Borough Council is a 'riparian owner' with responsibilities to maintain these watercourses in good condition.

In 2009 TBC agreed to increase the land drainage revenue budget; in order to allow for routine maintenance work to be carried out.

Table 2: Completed Tewkesbur	y Borough Council owned watercourse	maintenance works 2016 – 2017
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	Location	Parish	Works	Estimated Length (m)	Cost	
1	Kings Gate	Ashchurch Rural	Flail cutting of banks	181	£144.80	
2	Cold Pool Lane	Badgeworth	Blockages Clearance	Sum	£278.00	
4	Cold Pool Lane (playing fields)	Badgeworth	Flail cutting of banks and hedgerow	200	£160.00	
4	Trumpeter Road and Cold Pool Lane	Badgeworth	worth Flail cutting of banks (Renewal of gates)		£3,505.80	
5	Rhapsody Cl/Symphony Road	Badgeworth	Flail Cutting and de silt	400	£720.00	
6	Trumpeter Road	Badgeworth	Clearance of Reeds & pond	Sum	£1,633.60	
7	Bramble Chase	Bishops Cleeve	Collapse of bank near pathway (Fenced off to make area safe)	Sum	£148.00	
8	Bramble Chase	Bishops Cleeve	Collapse of bank near pathway (Tree removal & bank re shape)	Sum	£1,227.88	
9	Bramble Chase	Bishops Cleeve	Footbridge Repairs (replace wooden slats)	Sum	£390.00	
10	Bramble Chase	Bishops Cleeve	Flail cutting of banks	300	£240.00	
11	Blackberry Grove	Bishops Cleeve	Flail cutting of banks (adjacent Gabions)	50	£40.00	
12	Finlay Way	Bishops Cleeve	Flail cut	50	£344.00	
13	Finlay Way	Bishops Cleeve	Flail cutting of banks	420	£336.00	
14	Hayfield Way	Bishops Cleeve	Flail cutting of banks	512	£409.60	
15	Oldacre Drive	Bishops Cleeve	Flail cut and de silt	250	£1,000.00	
16	Oldacre Drive	Bishops Cleeve	Flail cut and de silt	250	£450.00	
17	The Grange	Bishops Cleeve	Fallen and dead tree removals	Sum	£795.00	

18	The Grange	Bishops Cleeve	eve Flail cutting of banks (walk through cut)		£2,050.00
19	Stoke Road	Bishops Cleeve	Flail cutting & de silt	55	£99.00
20	Tobyfield Close	Bishops Cleeve	Flail cut and de silt (walk through cut)	Sum	£18.00
21	Coopers View	Brockworth	Flail cutting of banks (walk through cut)	406	£324.80
22	Ermin Park	Brockworth	Fly Tipping	Sum	£162.00
23	Ermin Park	Brockworth	Flail cutting of banks	100	£80.00
24	Greenways	Brockworth	Clearance of trees/vegetation s (Eroding banks/collapse)		£4,207.20
25	Green Way Road	Brockworth	flail cutting and de silt (Balancing pond)	50	£106.00
26	Horsbere Brook	Brockworth	Fallen Trees	Sum	£1,440.00
27	Horsbere Brook	Brockworth	Pollard of Willow Trees	Sum	£3,120.00
28	Horsbere Brook	Brockworth	Fly Tipping	Sum	£119.00
29	Horsbere Brook	Brockworth	Flail cutting of banks (walk through cut)	500	£400.00
30	Grenville Close	Churchdown	Flail Cutting	250	£200.00
31	Parkside Close	Churchdown	Flail cutting of bank	66	£535.00
32	Parkside Close	Churchdown	Flail cut and de silt	66	£118.80
33	Trafalgar Drive	Churchdown	Flail Cutting (walk through cut)	375	£300.00
34	Bird Road	Hucclecote	Flail cutting and de silt	300	£540.00
35	Hathorn Road (Pond Area)	Hucclecote	Flail cutting and de silt	50	£90.00
36	Rookery Road	Innsworth	Flail cutting of banks	8	£165.00
37	Rookery Road	Innsworth	Flail cutting of banks & de silt	8	£14.00
38	Fircroft Road	Longford	Flail cutting of banks	115	£92.00
39	Tip Road	Stoke Orchard	Flail cutting of banks and de silt	100	£100.00
40	Bloody Meadow	Tewkesbury	Flail cutting and de silt	440	£792.00

41	Carrant Brook	Tewkesbury	Flail cutting of banks	500	£400.00
42	Council Offices	Tewkesbury	Flail cutting of banks	100	£80.00
43	Cricket ground	Tewkesbury	Flail cutting of banks	265	£212.00
44	Lankett Lane	Tewkesbury	Fly Tipping	Sum	£250.00
45	Lankett Lane	Tewkesbury	flail cutting of bank	180	£144.00
46	Lincoln Green Lane/ Battle Road	Tewkesbury	Fallen and dead tree removals	Sum	£760.00
47	Lincoln Green Lane/ Battle Road	Tewkesbury	Footbridge Repair	Sum	£73.50
48	Lincoln Green Lane	Tewkesbury	Flail cutting and de silt	550	£990.00
49	Rails Meadow	Tewkesbury	Flail cutting	395	£316.00
50	St Marys Lane	Tewkesbury	Flail cutting of bank & trees (Access difficult)	50	£40.00
51	The Vineyards	Tewkesbury	esbury Flail cutting of banks		£446.00
52	Voxwell Lane	Bishops Cleeve	Flail cutting of banks	100	£80.00
53	Pumping Station	Tirley	Clearance of Outfall	Sum	£115.00
54	Chargrove Lane	Shurdington	Blockage & vegetation removal (Nature Reserve)	180	£1,000.00
55	Chargrove Lane	Shurdington	Flail cutting of banks (Walk through cut)	180	£144.00
56	Tip Road	Stoke Orchard	Flail cutting of banks and de silt	100	£80.00
57	Beauchamp Road	Walton Cardiff	Clearance of reeds	sum	£289.00
58	Crown Road	Walton Cardiff	Clearance of reeds	sum	£1,344.00
59	Honeybourne Meadow	Woodmancote	De silt concrete channel	sum	£598.00
60	Pumping Stations	Deerhurst/Tirley	Service and Inspections (6 monthly)	sum	£1,480.00
61	Pumping Stations	Deerhurst/Tirley	Electrical Inspections (3 yearly)	sum	£776.00
62	Pumping Station	Deerhurst	Remedial works to electric	sum	£255.00
63	Trash Screens	Various (8 screens)	De silt and unblock	sum	£5,520.00
	-	-, -			£42,287.98

# Table 3: Tewkesbury Borough Council owned watercourse maintenance works proposed 2017 -2018

	Location	Parish	Works	Estimated Length (m)	Cost	
1	Kings Gate	Ashchurch Rural	Flail Cutting and de silt	181	£470.60	
2	Cold Pool Lane (playing fields)	Badgeworth	Flail cutting of banks and hedgerow	200	£520.00	
3	Rhapsody Cl/Symphony Road	Badgeworth	Flail Cutting and de silt	400	£640.00	
4	Trumpeter Road	Badgeworth	Clearance of Reeds & pond	Sum	£1,767.20	
5	Bramble Chase	Bishops Cleeve	Flail cutting of banks	300	£480.00	
6	Blackberry Grove	Bishops Cleeve	Flail cutting of banks (adjacent Gabions)	50	£80.00	
7	Finlay Way	Bishops Cleeve	Flail cutting of banks	420	£672.00	
8	Hayfield Way	Bishops Cleeve	Flail cutting of banks	512	£819.20	
9	Oldacre Drive	Bishops Cleeve	Flail cutting of banks	250	£400.00	
10	The Grange	Grange Bishops Cleeve Flail cutting of banks (walk through cut)		300	£480.00	
11	Tobyfield Close	Bishops Cleeve	Flail cutting of banks (walk through cut)	10	£16.00	
12	Stoke Road	Bishops Cleeve	Flail cutting of banks	55	£88.00	
13	Voxwell Lane	Bishops Cleeve	Flail cutting of banks	100	£160.00	
14	Coopers View	Brockworth	Flail cutting of banks (walk through cut)	406	£649.60	
15	Ermin Park	Brockworth	Flail Cutting and de silt (walk through cut)	100	£260.00	
16	Green Way Road	Brockworth	Flail cutting of banks (Balancing pond)	50	£80.00	
17	Green W/Abbotswood	Brockworth	Flail cutting of banks	20	£32.00	
18	Horsbere Brook	Brockworth	Flail Cutting and de silt (walk through cut)	500	£1,300.00	
19	Grenville Close	Churchdown	Flail Cutting	250	£400.00	
20	Trafalgar Dr/Snowdon	Churchdown	Flail cutting of banks (walk through cut)	375	£600.00	

			•		£22,141.60
37	Various Sites	Various	Footbridges over watercourses inspection and repairs	sum	£1,000.00
63	Trash Screens	Various (8 screens)	De silt and unblock	sum	To be confirmed
41	Pumping Stations	Deerhurst/Tirley	Service and Inspections (6 monthly)	sum	£1,480.00
40	Honeybourne Meadow	Woodmancote	Flail cutting of banks	300	£480.00
39	Collyberry Road	Woodmancote	Flail Cutting and de silt (walk through cut)	35	To be confirmed
38	Crown Road	Walton Cardiff	Clearance of reeds	sum	£1,488.00
37	Beauchamp Road	Walton Cardiff	Clearance of reeds	sum	£353.00
36	The Vineyards	Tewkesbury	Flail Cutting and de silt	446	£1,159.60
35	St Marys Lane	Tewkesbury	Flail cutting of bank & trees (Access difficult)	50	£130.00
34	Rails Meadow	Tewkesbury	Flail cutting of banks	395	£632.00
33	Lincoln Green Lane	Tewkesbury	Flail cutting of banks	550	£880.00
32	Lankett Lane	Tewkesbury	Flail Cutting and de silt	180	£468.00
31	Cricket ground	Tewkesbury	Flail Cutting and de silt	265	£689.00
30	Council Offices	Tewkesbury	Flail Cutting and de silt	100	£260.00
29	Carrant Brook	Tewkesbury	Flail cutting of banks	500	£800.00
28	Bloody Meadow	Tewkesbury Flail cutting of banks		440	£702.00
27	Tip Road	Stoke Orchard	Flail cutting of banks and de silt	100	£260.00
26	Chargrove Lane	Shurdington	Flail Cutting and de silt (Walk through cut)	180	£468.00
25	Fircroft Road	Longford	Flail Cutting and de silt	115	£299.00
24	Rookery Road	Innsworth	Flail cutting of banks (walk through cut)	8	£12.80
23	Hathorn Road (Pond Area)	Hucclecote	Flail cutting of banks	50	£80.00
22	Bird Road	Hucclecote	Flail cutting of banks	300	£480.00
21	Parkside Close	Churchdown	Flail cutting of banks (walk through cut)	66	£105.60

All works are subject to current quoted costs.

The contract involves:

- Flail cutting of banks twice yearly Jun/Jul and Oct/Jan
- De silting where necessary over a 3 year programme.

#### Table 4 – Forward Plan – Future Maintenance Issues

Table 4 shows potential future maintenance issues outside of the general maintenance on our owned watercourses. I.e. collapsing, slipping banks, substantial erosion etc.

Below shows the current known watercourses that potentially will cost substantial monies to fix in the future.

	Location	Parish	Problem	Risks -	Comments
1	Finlay Way	Bishops Cleeve	Banks eroding (very sandy soil)	Low	Monitor. Big open space behind.
					Near footpath. Re grade of bank
2	Bramble Chase	Bishops Cleeve	Collapsed bank	Very Low	and tree removal
					Monitor. On edge of rear garden
	Abbotswood		Banks slipping adjoining		boundary. Severn Vale Housing
3	Road/Green Acre	Brockworth	neighbouring properties	Medium	monitoring also.
					Monitor. Very deep and wide
3	Horsbere Brook	Brockworth	Collapsed gabion basket	Low	watercourse. Access issues.
					Monitor. Very deep and wide
4	Ermin Park	Brockworth	Steep bank with Trees	Low	watercourse. Access issues.
5	Greenways	Brockworth	Collapsing Banks	N/A	Work Complete
					Simple fix may be carried out
					here by using big stones to hold
6	Pineholt	Hucclecote	Banks eroding	Low	banks in place.
			Collapsed bank fenced off at		Monitor. Very deep and wide
7	Mill Avon	Tewkesbury	Gloucester Road, Tewkesbury	Low	watercourse.

# iii) Update on Grant Applications (including Flood Defence Grant in Aid)

# Table 5: Existing Schemes

Location	Scheme / Works Description	Funding Source	Funding Allocated	Progress	Estimated earliest construction start
Bishop's Cleeve, Woodmancote and Southam	Surface Water Management Plan (SWMP) outputs. SWMP has identified range of measures including diversion, storage and property protection	FDGiA, local levy and GCC contribution	£728k FDGiA £80k Local Levy £150k GCC	GCC is the lead authority tasked with progressing this scheme. Parish Council consulted in 2014 on the broad outline of an initial package of measures. GCC has appointed a design consultant to develop outline and detailed design.	2018/19 start 2019/20 finish
Churchdown	Surface Water Management Plan (SWMP) outputs. SWMP has identified range of measures including diversion, storage and property protection	FDGiA, local levy and GCC contribution	£71k FDGiA £13k Local Levy £40k GCC	GCC is the lead authority tasked with progressing this scheme. Outline design work in progress; however the scheme has been delayed owing to landowner objections. DEFRA requested to defer funding to 2017/18	2017/18

Location	Scheme / Works Description	Funding Source	Funding Allocated	Progress	Estimated earliest construction start
Prestbury / Whaddon	Two distinct but nearby flood storage areas (FSA) with targeted Property Level Protection measures	FDGiA, local levy and GCC contribution	£1,693k FDGiA £50k Local Levy £243k GCC	GCC is the lead authority tasked with progressing this scheme. The full planning application has been submitted Jan 2017 and awaiting determination. Tenders have been invited with a planned start in spring/summer 2017 using powers under Section 64 Land Drainage Act	2017
Brockworth	Surface Water Management Plan (SWMP) outputs. SWMP has identified range of measures including diversion, storage and property protection	FDGiA, local levy and GCC contribution	£142k FDGiA £15k Local Levy £40k GCC	GCC is the lead authority tasked with progressing this scheme. Outline design work in progress; however the scheme has been delayed owing to landowner objections. DEFRA requested to defer funding to 2017/18	2017/18

### Table 6: Funding Bids in progress

Location	Scheme / Works Description	Funding Source	Funding Allocated	Progress	Target Completion Date
Various	Priority Axis 6: Preserving and Protecting the Environment and Promoting Resource Efficiency	European Structural and Investment Funds (ESIF) - European Regional Development Fund (ERDF)	Notional allocation for Gloucestershire ~ £3M	The initial outline 'expression of interest' has been submitted as part of a wider consortium bid surrounding Green Infrastructure in the JCS area. The bid surrounds the betterment of green 'monoculture' areas into a network of mini meadow areas. The Grange Field project would act as the match funding.	One of the criteria of the call is that all projects need to be completed by 2020