# **Ellon Flood Study**

JBA

#### Public Meeting - 3 December 2018

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## Aim of this evening



- This is the first of two public consultations for the Ellon Flood Study.
- This is a presentation of the study to date.
- These are not the final results.
- The data derived for the study to date is used to appraise flood management options.
- Your inputs are invaluable into verifying the model results before appraisal of management options is completed.
- The second consultation will be in the Spring 2019 and will be a presentation of the options appraisal process. So that your opinions and ideas will be used to finalise the appraisal.

### **Study objectives**

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Develop flood risk understanding		
	Develop recommendations for management of flood risk	
Hydraulic modelling	·	
Determine existing flood risk	Develop range of	Select preferred option
Improve flood mapping	Appraise options Options for the future management of flood risk	SEPA will prioritise nationally where funding should be
Completed to SEPA's Flood Risk Management (Scotland) Act 2009 (FRM Act). Local Authority flood study checklist. Version 2, June 2017.		allocated Report and findings will inform this process
	Engagement	2019 2019

### What has been done so far?

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#### **Developing understanding of flood risk**

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### Survey and modelling





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Fortree Bur

2 Kilometers

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Hillhead Bun

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2016 Event Inflow Hydrograph



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### Modelled Storm Frank (January 2016)



### **Asset inspections**

- Condition
- Blockage risk
- Quick wins













### **Environmental surveys: ecology**

- avoid the need for land-take in semi-natural habitats
- avoid tree and scrub removal (particularly for bats, birds, Red Squirrels)
- minimise in-channel works (Otters, Water Voles, fish)
- no in-channel works between October and March (fish, particularly Salmon)
- avoid night-working in the main active bat season (April - September)



#### Environmental surveys: Natural flood management

- Increased vegetation cover
- Working within and on the banks of the channel
- Land management
- Runoff management



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## Flood risk mapping





# **Options appraisal – long list**

- Natural Flood Management
- Storage (engineering)
- Conveyance
- Control structures
- Direct defences
- Demountable defences
- Watercourse maintenance
- Property level protection (resistance and resilience measures)
- Relocation
- Flood forecasting and warning
- Structure modification

### **Area A: Modley Burn**





- Natural Flood Management
- Storage (engineering)
- Conveyance

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- Control structures
- Direct defences
- Demountable defences
- Watercourse maintenance
- Property level protection (resistance and resilience measures)
- Relocation
- Flood forecasting and warning
- Structure modification

37 properties at risk during 200 year event

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#### **Area B: Hillhead and Fortree Burns**



- Natural Flood Management
- Storage (engineering)
- Conveyance
- Control structures
- Direct defences
- Demountable defences
- Watercourse maintenance
- Property level protection (resistance and resilience measures)
- Relocation
- Flood forecasting and warning
- Structure modification

96 properties at risk during 200 year event

### **Area C: Old Bridge of Ellon**

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- Natural Flood Management
- Storage (engineering)
- Conveyance
- Control structures
- Direct defences
- Demountable defences
- Watercourse maintenance
- Property level protection (resistance and resilience measures)
- Relocation
- Flood forecasting and warning
- Structure modification

17 properties at risk during 200 year event

### **Area D: The Meadows**





- Natural Flood Management
- Storage (engineering)
- Conveyance

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- Control structures
- Direct defences
- Demountable defences
- Watercourse maintenance
- Property level protection (resistance and resilience measures)
- Relocation
- Flood forecasting and warning
- Structure modification

14 properties at risk during the 200 year event

### Next stages

#### Options appraisal

- Long list
- Short list
- Model short listed options
- Cost-benefit analysis
- Stakeholder engagement
- Council to agree preferred option
- Preferred option to be presented to the public