

Capital Flood Improvement Schemes: Ivybridge and Uplyme

Report of the Head of Planning, Transportation and Environment

Please note that the following recommendations are subject to consideration and determination by the Cabinet (and confirmation under the provisions of the Council's Constitution) before taking effect.

Recommendation: It is recommended that Cabinet:

- (a) approves the Ivybridge Flood Improvement scheme at an estimated cost of £300,000 and the Uplyme Flood Improvement Scheme at an estimated cost of £226,140;**
- (b) increases the Planning, Transportation and Environment (PTE) 2017/18 capital programme by £154,242 and 2018/19 by £300,000, funded £140,000 from the flood risk revenue budget, £19,242 from the revenue flood prevention works budget, £55,000 from external contributions and, £240,000 from external grants. £50,000 is to be allocated from the flood prevention works 2018/19 capital programme, funded by capital receipts.**

1. Summary and Purpose of Report

The town of Ivybridge and the village of Uplyme have both suffered repeat flooding in recent years, affecting properties and the highway infrastructure. This report highlights the history of flooding in these two communities and the ongoing high risk of future flood events during periods of heavy rainfall. It also details the proposed scheme options that have been developed to significantly reduce this ongoing risk and recommends that Devon County Council (DCC) supports the delivery of these essential flood improvements through its capital programme. Location plans are attached to this report.

2. Background

2.1 Ivybridge

During heavy rainfall the steep slopes in the upper catchment of Ivybridge generate significant runoff towards the developed area of Claymans Pathway, causing the capacity of the surface water drainage system to be exceeded. This leads directly to the flooding of properties in Claymans Pathway; overland flows continuing along the footpath also affect further properties in Slipperstone Drive. Internal flooding to properties has been experienced in this area for many years, with investigations indicating that this results from culvert capacities being exceeded beyond a 1 in 2 year event. When considering the design standard from the 1 in 100 year event, that we would be aiming to achieve, there are over 25 properties at risk that would benefit from these essential flood improvements.

2.2 Uplyme

The village of Uplyme experiences regular nuisance flooding affecting properties, highways and other infrastructure, such as the village hall. It was reported that over 14 properties were flooded internally during 2012, some on multiple occasions. A review of the drainage systems, including the watercourse channel and culverted sections, has identified a number of restrictions and inadequate culvert capacities, with a risk of flooding in some locations from a 1 in 2 year event. Others do not have the capacity to convey the 10 year flow. In

order to reduce the risk of future flooding and provide the current design standard of protection, it is essential that the restrictions are removed for improved conveyance.

3. Scheme Proposals

3.1 Ivybridge

The preferred scheme will upsize the existing culverted watercourse system. This will involve the installation of a 250m long, 750mm diameter, culvert from its inlet to the north of Stibbs Lane down through the residential area of Claymans Pathway and Slipperstone Drive, discharging into an existing open watercourse to the south. Its purpose is to convey overland flood flows downstream of the area at risk of flooding.

Additional natural flood management measures are also being promoted outside of this contract, with Defra funding being drawn down from the current Environment Agency 'Dartmoor Headwaters Project', to enhance and supplement the hard-engineered solution.

3.2 Uplyme

A number of measures are proposed at different locations to improve conveyance through the village, including:

1. Formalisation of overflow ditch to avoid restrictive culverts under the B3165, Lyme Road.
2. Installation of a 40m long, 450mm diameter, bypass culvert through the Uplyme Village Hall carpark.
3. Removal/alteration of a concrete service bridge from BT control box to the Village Hall.
4. Installation of an overflow culvert running adjacent to the existing main road culvert under the B3165, Lyme Road, upstream of the Village Hall.
5. Installation of a 100m long, 600mm diameter, flood relief culvert running under Pound Lane, connecting into an existing watercourse downstream.
6. Provision of protective silt traps and watercourse check weirs.

4. Consultations/Representations/Technical Data

Throughout the investigation and design process there has been a close working relationship between DCC's Flood Risk Management Team and Engineering Design Group, the District Councils (South Hams and East Devon), Uplyme Parish Council and relevant landowners. Regular updates have also been provided to the resident and Town Council representatives in Ivybridge.

The respective Planning Departments have been consulted and confirmed that, as both schemes are predominantly below ground, neither require formal planning permission and can be implemented as permitted development.

5. Financial Considerations

Business cases for both Ivybridge and Uplyme Flood Improvement Schemes are being prepared and will be submitted to the Environment Agency to bid for Defra Flood Defence Grant in Aid. Additional budget allocations have been requested from Local Levy and, for the latter scheme, from East Devon District Council. A breakdown of the cost estimates and proposed funding sources is tabled below.

The proposed implementation of the scheme and allocation of funding through DCC's capital programme is subject to formal confirmation of the external grants and contributions.

Stibbs Lane, Ivybridge			
Funding Source	Prior to 2017/18	2017/18	2018/19
Prior costs incurred by DCC			
DCC PT&E Flood Risk Management revenue budget		£50,000	£60,000
Flood Prevention Works capital programme allocation			£50,000
Flood Defence Grant in Aid		£10,000	£100,000
Local Levy			£30,000
Total		£60,000	£240,000

Uplyme			
Funding Source	Prior to 2017/18	2017/18	2018/19
Prior costs incurred by DCC	£21,898		
DCC PT&E Flood Risk Management revenue budget		£20,000	£10,000
DCC revenue budget for Flood Prevention Works		£19,242	
Flood Defence Grant in Aid			£70,000
Local Levy			£30,000
East Devon District Council		£55,000	
Total	£21,898	£94,242	£110,000

6. Sustainability, Equality and Public Health Considerations

The flood improvements mentioned in this report will be developed in accordance with the Equality and Environmental Assessments produced in support of the Devon Local Flood Risk Management Strategy. All elements of the scheme have been assessed at the appropriate stage using the corporate, integrated assessment tool, with relevant equality and environmental impacts identified and acted on as necessary.

The works outlined in this report are all designed to improve the protection afforded to the community and individual properties currently at risk of flooding and, thereby, support health and wellbeing. More than just protecting the properties alone, it should be noted that flood water has the potential for transporting contaminants, such as sewage; so, reducing flood risk has clear health benefits.

An environmental appraisal of the proposals indicates that, with appropriate mitigation, there will be limited impact upon landscape, historic and ecological interests. The scheme will also look to maximise any ecological opportunities.

In addition to the engineered works, natural flood management measures are also being promoted within both catchments to support and enhance the standard of protection and mitigate against the effects of climate change.

7. Legal Considerations

All works will be carried out in accordance with the powers and duties assigned to DCC under the Flood and Water Management Act 2010, the Land Drainage Act 1991 and any other relevant legislation. The lawful implications and consequences of the proposals and relevant actions have been considered through the design process and will be addressed, as necessary, through the implementation of the scheme. This will involve legal notices of entry to be served on private land/property owners to enable access for construction of the works.

8. Risk Management Considerations

The risks associated with flooding are set out in the Devon Local Flood Risk Management Strategy and addressed through DCC, Local Resilience Forum and local community emergency plans. In addition, the corporate risk register identifies the risks linked to the implementation of DCC's role as Lead Local Flood Authority. The proposed works are designed to reduce these risks and align with these strategies and plans.

The current standard of protection in both locations is in the region of 1 in 2 years, which is considered a significant high risk. The proposed improvements aim to move the risk to a category of low risk, which will maximise the benefits for the communities.

9. Discussion

The delivery of these important flood improvements will provide a significantly greater standard of protection and reduce the frequent risk of flooding to the affected properties in both Ivybridge and Uplyme, including many community assets, small independent businesses and the highway network.

The business cases to be submitted to the Environment Agency justify the intended level of investment required for the proposed improvement schemes, in accordance with national objectives. Both areas are also rated as high priority catchments for investment when considered against the criteria set out in the Devon Local Flood Risk Management Strategy.

10. Options/Alternatives

Several options were considered at both locations to achieve the most cost beneficial schemes. Schemes focusing only on natural flood management were reviewed in detail, but were found not to provide the required standard of protection and any benefits that would be gained were outside of an acceptable timescale. However, some of these measures will be delivered to provide added benefit to the engineered options and assist in mitigating the effects of climate change.

All alternative options were considered against a range of factors such as environmental impact, flood risk benefit, social impact, health and safety implications and economic affordability. The assessments indicated that the preferred options, and hence the proposed schemes, are deemed to provide the most advantageous and cost beneficial schemes that will give immediate benefit upon completion of the works. This will be fully scrutinised by the Environment Agency's National Project Assurance Service, as part of the business case approval process for Defra funding.

11. Reason for Recommendation/Conclusion

The frequency of flooding experienced in both Ivybridge and Uplyme and the continuous threat of internal flooding to properties and businesses and the disruption to the highway

network has placed both locations high on Devon County Council's priority list for investment in flood risk management. It is, therefore, recommended that the proposed schemes are approved for delivery through the DCC capital programme, maximising external funding from Defra Grant in Aid and Local Levy, to secure these essential flood improvements and hence reduce the risk of flooding to both Ivybridge and Uplyme.

Dave Black
Head of Planning, Transportation and Environment

Electoral Divisions: Ivybridge and Axminster

Cabinet Member for Community, Public Health, Transportation and Environmental Services:
Councillor Roger Croad

Chief Officer for Communities, Public Health, Environment and Prosperity: Virginia Pearson

Local Government Act 1972: List of Background Papers

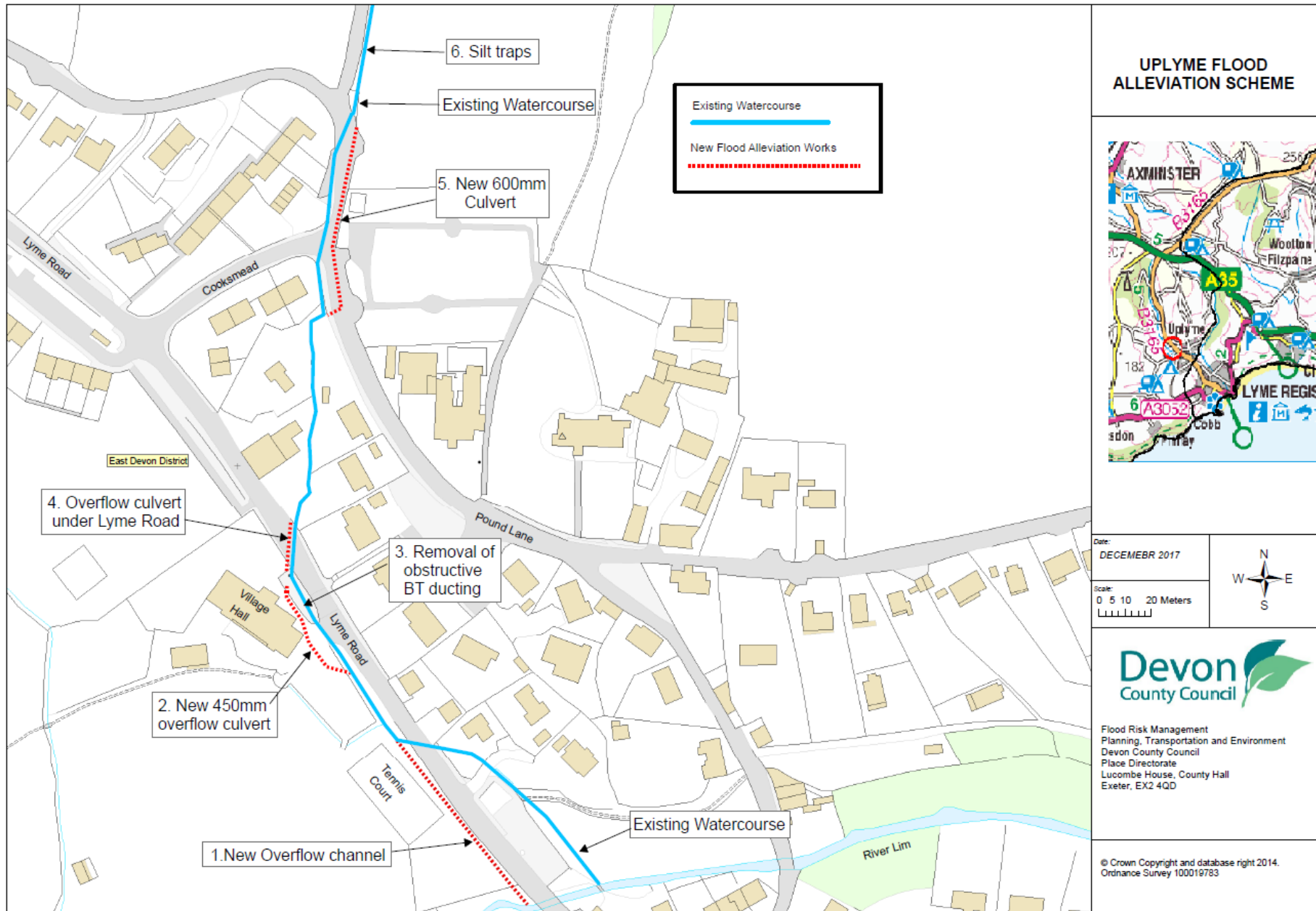
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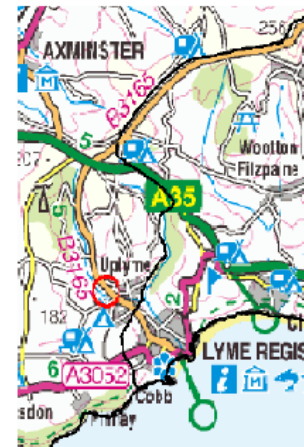
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Background Paper	Date	File Reference
Local Flood Risk Management Strategy and Annual Action Plan	May 2014 March 2017	https://new.devon.gov.uk/floodriskmanagement/local-flood-risk-management-strategy/

mh051217cab Capital Flood Improvement Schemes Ivybridge and Uplyme
hk 04 191217



UPLYME FLOOD ALLEVIATION SCHEME



Date: DECEMBER 2017

Scale: 0 5 10 20 Meters



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 Planning, Transportation and Environment
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