CRANBROOK LOCAL PLAN EXAMINATION

REPRESENTATIONS

MATTER 7

THE GRANGE EXPANSION AREA

PREPARED ON BEHALF OF WADDETON PARK LTD

January 2020

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REPRESENTATIONS

MATTER 7

THE GRANGE EXPANSION AREA

1. Issue 10: Is the Grange Allocation (Policy CB5) positively prepared, justified and effective?

1.1 Question 106

Is the proposed housing allocation deliverable and/or developable in accordance with the housing trajectory?

1.1.1 The Grange allocation is not deliverable in accordance with the housing trajectory due to the inability to deliver the required infrastructure, in particular, SANGS (see our response to Matter 1, Issue 1, Questions 4 and 8, where we have expressed significant concerns regarding the delivery of SANGS).

1.1.2 The area allocated for SANGS in accordance with Strategy 10 of the EDLP can be delivered via amendment to the area of the proposed allocation i.e. through the inclusion of land more suitable for development, that has a lesser landscape impact and is capable of alleviating existing surface water flooding in Rockbeare.

1.1.3 We consider that insufficient consideration has been given to the existing surface water flooding at Rockbeare. In advice obtained by the Parish Council from Hydro Logic Services [Appendix 1] it is apparent that as a result of the removal of land previously proposed for allocation (i.e. our client's site south of London Road) that there is now some uncertainty regarding how flood risk will be managed.

1.2 Question 107

Has full consideration been given to the impact of this allocation on:
a) Access arrangements.
b) Landscape impact.
c) Flood risk management and water quality.
d) Ecology and the impact on natural habitats.

1.2.1 See response in respect of Question 106 above.

1.3 Question 108

How will the revised plan area ensure that there is no risk of settlement coalescence with Rockbeare?

1.3.1 Rockbeare is enclosed by a shallow escarpment to the north and north-east and hilltop to the west (see Plan Area Analysis, Cran042 and Visual Analysis Plan, Cran043 for illustration). This ridgetop escarpment and hilltop provides visual separation between the village and Cranbrook which, along with the protection of landscape features and landscape enhancement measures, will maintain the physical and visual separation between Cranbrook and Rockbeare (see Landscape and Visual Appraisal November 2017 [Cran032] and, in particular, paragraphs 6.5, 4.2.2 and 7.2.15).

1.4 Question 109

What features informed the selection of the eastern extent of this allocation?

1.4.1 As explained in our representations to the Publication Draft it would appear to us that the Council's decision to abandon their preferred approach (and omit land to the South of London Road) in favour of land to the east was informed by local politics and not sound planning judgements. The effect of which has been the adoption of an approach that has spatial implications and a greater environmental impact than the Council's Preferred Approach. The Council's decision in this respect has not been adequately justified, neither is it addressed in the SA.

1.5 Question 110

What is the justification of the allocation south of London Road? Were any undertakings given in the EDLP that development would not encroach south of London Road?

1.5.1 Allocation of land south of London Road maximises the opportunity to deliver a more coherent pattern of development that is proximate and well related to the proposed town centre of Cranbrook. There is no undertaking in the EDLP that precludes development south of London Road.

1.5.2 In our view, Cran001 fails to incorporate sufficient land for development to the south of London Road that would facilitate a mix of uses/streetscene/foot and cycle connectivity as well as green infrastructure linkages between the west and east of Cranbrook.

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Appendix 1 Hydro-Logic Services Report, dated 30th July 2019

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The Chairman – Rockbeare Parish Council
c/o Parish Clerk - Carolyn Y. May,
A2 Victoria Advent House,
Station Approach,
Victoria, Roche
Cornwall
PL26 8LG

30th July 2019

Ref: K0922/pw

Dear Mr Wollen,

COMMENT ON CRANBROOK PLAN IN RELATION TO FLOODING AT ROCKBEARE

1 Terms of Reference

This is a Report prepared by me, Dr Paul Webster for the Rockbeare Parish Council. It follows the submission of a fee proposal (reference QT10010 Rev 3 dated 5th June 2019) and the subsequent instruction by the Parish Council.

The purpose of the Report is to comment on specific aspects of the Cranbrook Plan in relation to flooding at Rockbeare.

This Report has been informed by the following:

- Personal knowledge of the area having undertaken a hydrological investigation for the Environment Agency of the flooding in East Devon in October 2008[1].
- Familiarisation with the flood history in a meeting with Ivan Randall on 18th July 2019.
- Site visit on 18th July 2019.

The structure of this Report is as follows:

- Terms of Reference (this Section)
- Review of historic flooding (Section 2)
- Description of flood risk management measures (Section 3)
- Description of possible off-line scheme (Section 4)
- Implications for the Cranbrook Plan (Section 5)

This Report results from a very brief review that was consistent with the instructed work by the Parish Council. There may, accordingly, be some inaccuracies that I would be pleased to review and correct, where necessary.

[1] *East Devon Flood Event - 29/30th October 2008: Hydrological Review*. For Environment Agency. Final Report (Ref J2511/5), March 2010

2 Flood History

The flood history for Rockbeare has been well documented by others. The photographs of the flood events provide a reminder of the regularity of the flooding in 1972 (Figure 1) 1994; 2008 (Figure 2) and 2012.

Figure 1: Flooding in 1972 ???

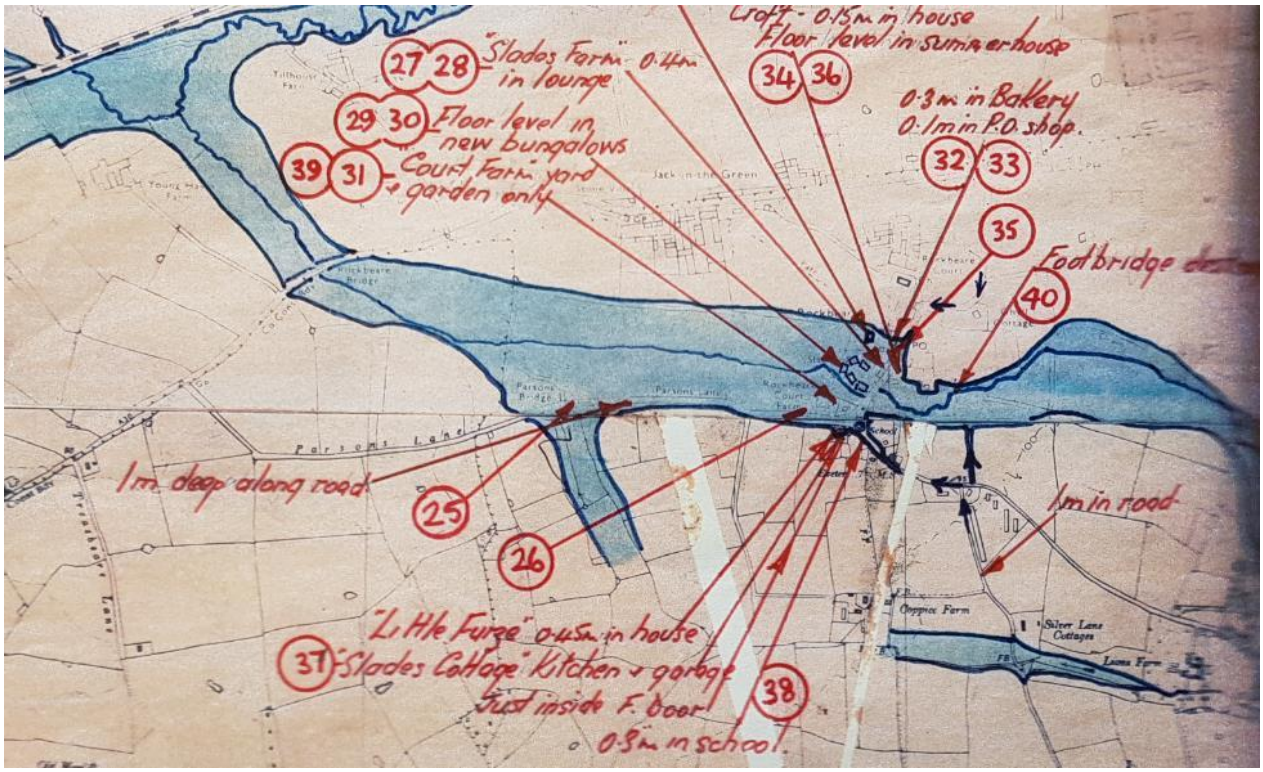


Figure 2: Properties flooded in 2008

3 Mitigating the effects of flooding

Flood risk management measures fall into three very general categories:

- Protection of properties at risk of flooding through provision of flood resistance and resilience measures.
- Increasing the flow capacity of the river channels in order to reduce flood levels.
- Undertaking works upstream of the at risk locations to reduce the peak flow in the channels.

The first of these has already been implemented through DEFRA grant funded works as illustrated in Figure 2.

The second of these, that of increasing the flow capacity of the channel through the village, would be an immense challenge. The channel is small, sinuous and constricted at several locations. The road bridge is one of the main constrictions or pinch points. However, it is not the only one. This means that even if it was possible to increase the flow capacity of the bridge, the benefits may be small due to restrictions elsewhere in the village.

This means that the only practical way to deliver flood risk reduction in the village is by the third method – of reducing the flow from the catchment upstream of the village.

Traditional measures to reduce the flow from a catchment involve the construction of **flood storage basins**. These store water and by releasing it at a reduced rate, are able to reduce and delay the peak of the incoming flood - attenuation. There are numerous examples of such installations which are effective in small and medium sized catchments. However, they are not appropriate in large catchments (like the Exe) because the volume of flood storage is so large and has too large a land requirement.

More recently, there has been much interest in **natural flood management** (NFM). These measures are typically small scale and are designed to slow the flow from the upstream catchment. They range from measures to increase the infiltration of rainfall into the soil, through to “leaky” dams (small obstructions introduced into watercourses) through to small scale flood storage basins. The DEFRA funded project in the River Otter catchment that has seen the managed introduction of beavers is an example of an NFM measure.

Both types of measures (traditional and NFM) should reduce flood risk. However, in general terms, whilst the NFM measures are effective for small and medium floods, they are less effective for the major floods. In general, traditional engineered methods are designed to reduce the impacts of major events.

In my opinion, there is room for both types of measure. However, in the specific case of Rockbeare, there is little doubt in my mind that the traditional, engineered methods are the only viable way to deliver the required reduction in flood risk.

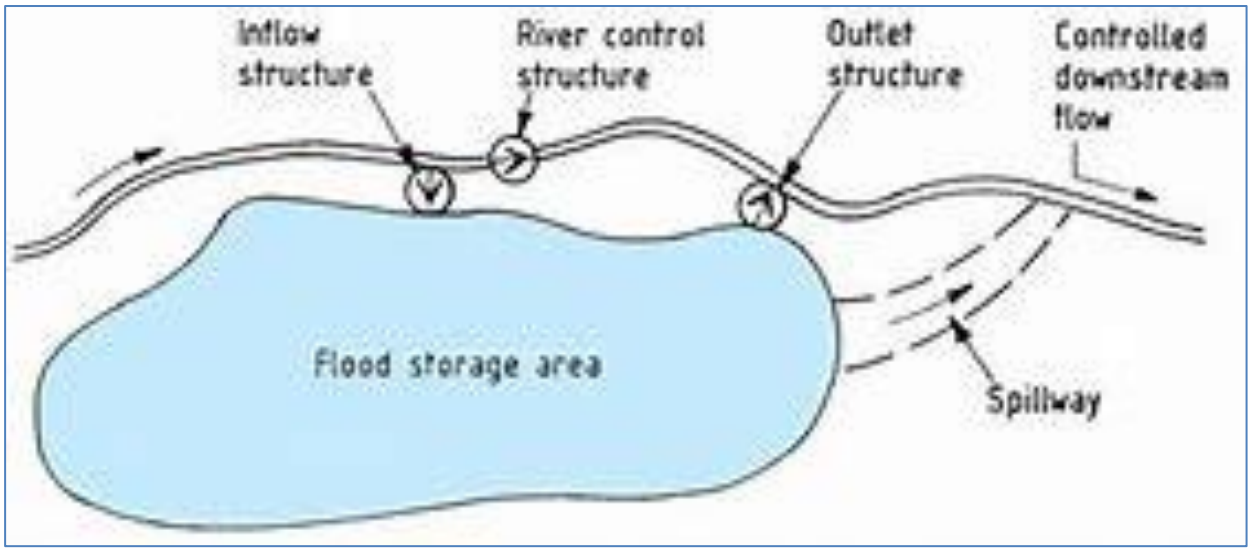
4 Where can an engineered solution be implemented?

In order to deliver the maximum benefit, the works should be implemented just upstream of the village. It is my understanding that preliminary work has been undertaken for a scheme in the floodplain just upstream of the village (Figure 3).

The proposed scheme would be an **off-line flood storage reservoir.** The term "off-line" means that the stream does not flow through the reservoir (Figure 4). The storage would be partly within the existing flood plain, but additional storage would be created by further excavation.

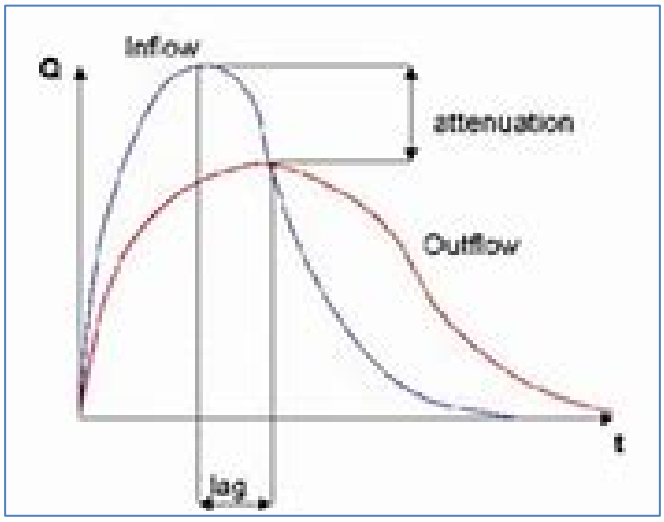
Figure 3: Panorama of possible location (view to south)

Figure 4: Features of an off-line storage reservoir



The effect on the flow hydrograph is shown in Figure 5 – the peak of the flood is both reduced and delayed.

Figure 5: The effect of an off-line storage reservoir on flow



5 The relevance to the Cranbrook Plan

Under the original Cranbrook Plan Preferred Approach October 2017, land earmarked for development within the plan area would have facilitated the construction of the off-line flood storage reservoir. There existed a possibility that, subject to appropriate funding and permissions, that the scheme could be implemented.

However, the land is no longer included in the Submission Draft of February 2019. This effectively means that the prospects for the only viable means of reducing flood risk for the village are threatened.

This appears to be a serious "missed opportunity". I would therefore encourage the Parish Council to seek an amendment to the plan such that the opportunity for future implementation of a flood storage scheme continues to be available.

Thank you for the instruction for this work. I trust that the findings of this brief report are helpful. Please do not hesitate to contact me if you should require further clarification.

Yours sincerely,

Paul Webster

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