

APPENDIX M

WAVERLEY BOROUGH COUNCIL

ENVIRONMENT AND LEISURE OVERVIEW AND SCRUTINY COMMITTEE

16 JUNE 2009

EXECUTIVE - 7 JULY 2009

Title:

FLOOD RISK MANAGEMENT IN-DEPTH REVIEW

[Portfolio Holder for Environment: Cllr John Sandy]

[Wards Affected: All]

Summary and purpose:

This report draws together the information gathered for the Committee's review of Waverley's preparedness to respond to major flooding emergencies. It includes the emerging national developments in flood risk management, in particular the Pitt Review, the Government's new strategy document entitled 'Future Water' and the Draft Flood and Water Management Bill published in April 2009.

The Environment and Leisure Overview and Scrutiny Committee considered this report at its meeting on 16th June 2009 and its comments are included at the end of the report.

How this report relates to the Council's Corporate Priorities:

Waverley works with Surrey County Council and other agencies in Surrey to manage the risk of flooding in the Borough in order to protect the safety of our communities.

Equality and Diversity Implications:

Members of the general public have a role in helping to protect themselves from the effects of flooding. However, it is also important to ensure that help is provided to the more vulnerable members of our community who may be unable to protect themselves in times of flooding.

Resource/Value for Money implications:

The recent publication of the Draft Flood and Water Management Bill has made it clear that the organisations with primary responsibility for managing flood risk will be the Environment Agency and either unitary authorities or county councils. Waverley will have a duty to assist and co-operate but it is difficult to make an accurate assessment of the additional resources that may be required. However it seems likely that Waverley and other district councils will be expected to strengthen their ability to manage flood risk, which in turn will almost certainly have both financial and HR implications.

Legal Implications:

There are no direct legal implications arising from this report.

Background

1. At its meeting on 28 April 2008 the Committee received a short presentation from the Council's former Safety and Emergency Planning Advisor on the functions and respective roles of the Council, followed by presentations from partner agencies including the Environment Agency, Surrey Fire and Rescue and SCC Highways. Following these presentations, Members agreed that the review should focus on Waverley's preparedness to respond to flooding emergencies.

Scale and nature of the flood risk in Waverley

2. To understand the likely scale and nature of flooding that could occur in Waverley it is important to understand the various types of flooding. These are as follows:

(a) Fluvial flooding (flooding from rivers)

3. This occurs when the water features (brooks, streams, rivers and lakes) cannot cope with the amount of water draining into them from the land. In winter months this is usually because the ground has become saturated and can no longer absorb water properly. When rainfall is heavy and/or prolonged, large amounts of run-off reaches the rivers and eventually causes them to overtop their banks.
4. The rivers in Waverley include the Wey, the Blackwater, the Loxwood Stream, the Littlemead Brook and Cranleigh Waters. Some sections of these rivers and other critical water courses in Waverley were designated as 'Main Rivers' in April 2006, and became the responsibility of the Environment Agency. A list of these 'Main Rivers' is attached as Annexe 1. Waverley also has a few large ponds, lakes and reservoirs, including Broadwater Lake and the two Frensham Ponds.
5. Any property that is in close proximity to a river, watercourse, lake or pond may be affected by fluvial flooding, and the areas most at risk from fluvial flooding in Waverley include Cranleigh, Bramley, Godalming, Elstead, Tilford, Frensham and Farnham. The Environment Agency has recently produced a Local Flood Warning Plan covering these areas, and over 2,000 properties are now provided with a flood warning service. Attached as Annexe 2 is a table showing information drawn from the Flood Warning Plan that gives details of the flood warning areas, a brief flooding history, the number of properties involved and the probability of flooding in any one year.

(b) Pluvial flooding (flooding from land)

6. This is caused when the intensity of rainfall exceeds the capacity of the drainage systems or when, during prolonged periods of wet weather, the soil is so saturated such that it cannot accept any more water. Pluvial flooding can affect any property in the Borough and appears to be more commonplace with changes in weather patterns.

(c) Flash flooding

7. This can happen anywhere at any time, although it is more likely to happen in summer or winter months when the ground is hard and dry or saturated from previous storms. When sudden downpours occur such as those associated with thunderstorms, the rain cannot be absorbed into the ground. The water is then forced to run off into drains, ditches and culverts, which cannot cope with the volume. This effect then causes the rain to pool and in severe cases flood. As with pluvial flooding, this can affect any property in the Borough and again appears to be becoming increasingly commonplace as a result of changing weather patterns.

(d) Groundwater flooding

8. This is rare and only occurs when the underground water table rises to an unusually high level, typically after prolonged rainfall, i.e. during an unusually wet autumn and winter. As a result of the high rainfall the water table rises above its normal level. This effect causes springs and wells that may have been dry to flow again, and may cause nearby properties to flood. Properties at risk from groundwater flooding in Waverley include those that are low-lying and those that are located where the natural geology produces spring lines e.g. in Hascombe and Haslemere.

Waverley's current role in dealing with flooding

9. Currently Waverley has a number of flooding related roles, 'before', 'during' and 'after' a flood, that can be summarised as follows.

(a) Before a flood

10. The Council and its predecessor authorities have over the years worked to reduce the risk of flooding. There are over 4km of flood defences comprising culverts, pipelines, channels and associated structures across the Borough. The Council accepts responsibility for the maintenance of these except where the riparian owner (a person who owns land on the bank of a watercourse and who has certain rights and duties in relation to the watercourse) has elected to do so. Actions to reduce flood risk include -
 - Inspecting and maintaining the existing flood defence assets. (Checking and cleaning 'trash screens' prior to forecast heavy rains).

- Monitoring and maintaining ordinary watercourses where Waverley is the riparian owner.
 - Advising other riparian owners of their duty to maintain watercourses.
11. Waverley has a duty to offer advice to householders and to promote business continuity planning to local businesses. There are several pages on the Waverley website giving advice and providing links to other useful sources of information. It is important to manage public expectation of the Council's role in flooding. The unpredictable nature and scale of flooding events means that the public should be encouraged to be as fully prepared and as self sufficient as possible.
 12. Waverley, as the local Planning Authority, must have regard to the DCLG document, *Planning Policy Statement 25 (PPS 25) Development and Flood Risk* when determining planning applications. PPS25 states:

'The aims of planning policy on development and flood risk are to ensure that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at highest risk.'
 13. In assessing areas that would be appropriate for development, all local planning authorities are required to have regard to the 'flood zones' identified by the Environment Agency which are set out in Annexe 3. These flood zones refer to the probability of sea and river flooding only, and ignore the presence of existing defences.
 14. PPS25 also advises local planning authorities to prepare a Strategic Flood Risk Assessment (SFRA) in consultation with the Environment Agency. This is used to consider the appropriateness of an area for new development. Work has begun on preparing an SFRA but there is still some way to go before it is approved by the Environment Agency.

(b) During a flood

15. Waverley currently offers a 24-hour emergency response service, for the provision of sandbags (to those in immediate risk of flooding) and for the clearance of watercourses.
16. The Surrey Local Resilience Forum (a group that consists of the chief officers from the key organisations that will respond to a disaster in Surrey, including the emergency services, the Primary Health Care Trusts, a representative of Surrey Borough and District Chief Executives and the Commander of Deepcut Garrison) are working on a common sand bag policy. The draft version includes the following general advice to district and borough councils:

'In answering calls from the public regarding the free provision of sandbags you should make it clear that local authorities have no legal requirement to supply sandbags in an emergency. However the policy adopted in Surrey is to

provide them to occupied residential properties that are judged to be in imminent danger of flooding subject to a risk assessment (if there is time). Owners of those residential properties judged not to be in imminent danger and all commercial premises should be invited to contact a local contractor'.

17. As Members will know from the presentation given by the Council's former Safety and Emergency Planning Advisor in April 2008, this advice mirrors Waverley's existing policy. Veolia Environmental Services hold a stock of 200 filled sandbags, 1000 unfilled sandbags and 900 'Floodsax' at the Farnham depot. These are distributed by Veolia staff, when instructed to do so by Waverley Engineers.
18. Waverley is keen to encourage parish councils to prepare their own local flood plans, and where possible Waverley is able to provide a small quantity of sand bags to a town or parish for them to distribute via their own flood wardens. Bramley Parish Council is leading the way, and has already produced its own flood plan.
19. As Members will also know, the Waverley Emergency Plan has provision for the opening up (at short notice) of a number of rest centres across the Borough (as necessary) to provide temporary accommodation for anyone who has had to move out of their home. The map attached as Annexe 4 shows the location of these rest centres.

(c) After a flood

20. Waverley carries out investigations of flooding incidents and, where resources permit, may carry out works to reduce the flooding risk or may persuade riparian owners to carry out remedial works.

Advice from central Government and its impact on Waverley's future role in managing flood risk

21. The Government has published a number of documents on flooding in recent months which are referred to in the following paragraphs.

(a) 'Future Flooding'

22. The Government has recently produced a report called *Future Flooding*, which warns that the risk from flooding will increase between 2 and 20 fold over the next 75 years. The report, produced by the Office of Science and Technology, has a long-term vision for the future (2030 – 2100), helping to ensure effective strategies are developed now.

(b) 'Future Water'

23. Another document that is relevant to the role of local authorities in managing flood risk is the Government's water strategy for England, entitled 'Future Water'. This strategy was published by DEFRA in February 2008 and covers

all aspects of water including water demand, water quality, charging for water and flooding.

24. Chapter 5 on surface water drainage proposes a number of strategies to reduce flood risk including exploring how the different organisations involved in urban drainage can work in partnership to promote a more strategic and integrated approach to surface water management. These include the increased reuse of water through rainwater capture, increased above-ground storage and the routing of surface water separate from the foul sewer system.
25. Chapter 6 covers river and coastal Flooding and includes advice from another DEFRA publication *'Making Space for Water'* which sets out the future strategy for flood risk management in England. The overall high-level vision is summarised as –
 - Flood management that contributes to sustainable development.
 - An understanding of future flooding risk fully embedded into the planning system.
 - Management of urban flood risk through clear understanding of responsibilities, partnership working and strategic planning.
 - Public understanding of the risks we face and the actions we can take.
 - Ensuring that communities can cope with flooding through improved development planning, emergency planning and response, and minimising the impact of flooding on homes, buildings services and utilities.

(c) The Pitt Review

26. The final report of the review entitled 'Learning Lessons from the 2007 Flood' carried out by Sir Michael Pitt, published in June 2008, makes over ninety recommendations many of which refer to 'local authorities'.
27. The Pitt Report summarises what people need as follows:
 - Reducing the risk of flooding and its impact.
 - Better advice and help for people to protect their families and homes.
 - Knowing where and when it will flood.
 - Being rescued and cared for during an emergency.
 - Maintaining power and water supplies and protecting essential services.
 - Staying healthy and speeding up recovery.

(d) Draft Flood and Water Management Bill

28. The Draft Flood and Water Management Bill was published, for consultation, in April.

The Bill includes regulations covering sustainable drainage, the water industry, reservoirs and flood risk management.

The Government proposes that national flood risk will be managed by the Environment Agency and local flood risk by the 'lead local flood authority'.

The 'lead local flood authority' means the unitary authority or the county council for the area.

Along with other duties the 'lead local flood authority' will be required to –

- Develop and publish a strategy for local flood risk management.
- Undertake and submit a preliminary assessment report to the Environment Agency by June 2011 (including information about previous floods in the area, information about the consequences of previous floods and an assessment of the potential consequences of future flooding).
- Prepare a flood hazard map and a flood risk map and submit these to the Environment Agency by June 2013.
- Prepare a flood risk management plan and submit it to the Environment Agency by June 2015.

The role of the Borough or District will be to cooperate with and provide information to the Environment Agency and to the county council.

Developments at County Level

29. The Local Resilience Forum 'Flood Task Group' has completed work on a County Multi-agency Flood Plan. This is an emergency planning document similar to the existing Surrey Major Incident Plan.

The boroughs and districts have also have been required to produce a local multi-agency flood plan to support the county plan. This plan has made use of Environment Agency data and mapping to identify the location of vulnerable people and critical assets in the Borough. (A short presentation of this plan can be given to the Executive).

Assessment of Waverley's level of preparedness and resources available for managing flooding

30. Waverley undertakes the following :
- Carries out limited maintenance of watercourses and existing flood defences owned by WBC
 - Gives advice to householders and businesses.
 - Encourages riparian owners to maintain their watercourses.
 - Asks planning applicants to follow the advice set out in PPS 25 (see paras. 12 to 14) by producing site-specific Flood Risk Assessments.

- Offers a 24-hour emergency response service, for the provision of sandbags and for the clearance of watercourses
- Works with Parish Councils and other interested groups to promote self-sufficiency.
- Has provision for the opening up (at short notice) of a number of rest centres across the Borough

31. Waverley does not have the resources or capacity to:

- Regularly inspect and maintain all the Council's flood defence assets (e.g. CCTV surveys were last carried out around ten years ago).
- Map all watercourses in the Borough, and research who is responsible for their maintenance.
- Undertake routine inspection of watercourses owned by others (riparian owners), and to use enforcement powers to see that they are maintained.
- Construct new flood defences.

Waverley does not currently have an approved Strategic Flood Risk Assessment for the Borough (see paras. 12 to 14).

32. Waverley has the equivalent of 1.2 full time members of staff to carry out the land drainage and flood defence function in 2009/10. This figure includes both management and support staff.
33. The revenue funding allocated for the routine maintenance of the Council's drainage infrastructure and ordinary watercourses, and for the provision of a 24 hour emergency flood defence response is currently (2009/10) £30,000 per annum.
34. Half of the existing revenue budget i.e. £15,000 funds the flood risk management contract with Veolia. This provides for a 'out of hours' duty officer, the storing of sandbags and the routine clearing of trash screens/grills (approx. 20, twice a month in winter and once a month in summer). The remaining £15,000 covers emergency repairs, small maintenance works, additional checks of trash screens prior to very heavy rainfall and the delivery of sandbags.
35. There is no allocation for flood risk management schemes in the 2009/10 capital budget.
36. Additional resources are provided for the maintenance of the Council's 'out-of-hours' service, which responds to emergencies relating to all of the Council's functions, including flood defence.

37. The response to extreme flooding events is additionally supported by the Civil Emergency Plan provision. The Council's policy in relation to serious flooding emergencies is to use its reserves, if necessary, in the interests of providing emergency flood protection and relief.

Conclusion

38. As is clear from this review, flood risk management across the UK has moved from a low to a high priority. Since the floods in the summer of 2007, the Government has invested very substantial resources in reviewing flooding (Pitt Review), in developing future strategies (Future Water) and in developing new legislation (Flood and Water Bill).
39. The Government has also been acting on the advice that it has received and has made progress on improving the UK's ability to manage flood risk. The Environment Agency and the Met Office in particular have carried out work on improving forecasting and on mapping areas at risk of flooding.
40. Waverley has been playing its role in the Surrey Local Resilience Forum in developing its 'emergency planning' mapping of the Borough and is improving the guidance available for the general public.
41. It is suggested that there are some tasks that could be undertaken by Waverley, to improve the Council's ability to deal effectively with future flooding events. These include:
- Completion of a Strategic Flood Risk Assessment in consultation with the Environment Agency. (see paras. 12 to 14). The cost of the SFRA will be covered by the existing planning service budget.
 - Encouraging town and parish councils to take more of an interest in managing flood risk, using Bramley Parish Council as an example of good practice. This can be achieved using existing staff resources.
 - Supporting and co-operating with the Environment Agency and the new 'lead local flood authority' (i.e. Surrey County Council). These are new relationships and the cost to Waverley of 'supporting and co-operating' is unknown.
 - Mapping, surveying and maintaining, WBC owned, watercourses and assets. Much of this can be done using existing staff resources. Additional costs of CCTV surveying in the region of £10,000 - £20,000 would be required and budget bids would be needed at the appropriate time.

Comments from the Environment and Leisure Overview and Scrutiny Committee

42. The following observations were made by ELOS on the findings on this review:

- The Committee would like assurance that there is a Strategic Flood Risk assessment timetable in place.
- There is a consultation on the draft Flood and Water Management Bill and the Committee felt that this should be discussed by the Waverley Local Committee.
- The Committee were concerned about references to a lack of resources to deal with Flood Management and the Council being able to respond when there was large scale flooding.
- There was concern whether there were facilities locally to store the number of sand bags required to deal with flooding in an emergency.
- The Committee was concerned whether the figures were a true reflection of flooding (particularly flash flooding) in the Borough, specifically in Bramley, Elstead and Tilford.
- Some Members had received complaints from members of the public who felt there was not enough communication with those homeowners and businesses who were affected by flooding. The Committee agreed that the Council was an obvious point of contact for local people and agreed that the Council should develop arrangements for advising residents by all available means in times of flooding.
- There was a concern that the maintenance from water authorities was sometimes wanting as problems had occurred in rural areas e.g. Ewhurst.

Recommendation

That the Executive notes the comments from ELOS and supports the following conclusions

1. A Strategic Flood Risk Assessment (Level 1) be completed, in consultation with the Environment Agency, by April 2010. The cost of the SFRA will be covered by the existing planning service budget.'
2. Town and parish councils be encouraged to take more of an interest in managing flood risk, using Bramley Parish Council as an example of good practice. This can be achieved using existing staff resources.
3. Supporting and co-operating with the Environment Agency and the new 'lead local flood authority' (i.e. Surrey County Council). These are new relationships and the cost to Waverley of 'supporting and co-operating' is unknown.
4. There needs to be further Mapping, surveying and maintaining of WBC owned, watercourses and assets. Much of this can be done using existing staff resources.
5. The Council should look into promoting existing arrangements for advising residents by all available means in times of flooding.

Background Papers (SDE)

There are no background papers (as defined by Section 100D(5) of the Local Government Act 1972) relating to this report.

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ANNEXE 1

Critical Ordinary Watercourses designated as Main Rivers	
Farnham Park Tributary (S146)	(Six Bells to Bourne Mill)
Farnham Bourne (Wey) (S147)	(The Bourne Stream)
Jumps Stream (S148)	(Hale House Lane to River Wey via Frensham Little Pond)
Truxford Brook (S149)	(Thursley to Elstead)
Royal Brook (S150)	(Park Lane to Witley Park via Brook)
Pot Common Brook (S151)	(Elstead Common)
Littlemead Brook (S152)	(The arterial stream through Cranleigh - Ewhurst Road)
Holdhurst Brook (S153)	(Nightingales/Orchard Gardens, Cranleigh)
Hascombe Stream (S154)	(Bramley Mill to Cranleigh Waters)
Hascombe Tributary (S155)	(Bramley Mill)
Ock (S156)	(Milford to Godalming River Wey)
Blackwater River (S158)	(Rowhills Copse - County Boundary)
Nuthurst Stream (S159)	(Cranleigh Village Estate to Littlemead)
Alderbook Stream (S160)	(Rowly, Cranleigh)
Wey South Branch Tributary (S161)	(St. Christopher's Road, Haslemere)
Wey South Branch - Railway (S162)	(Sicklemill to Haslemere Town)
Frensham Vale Stream (S163)	(Frensham Vale to Dene Lane West)
Wey (South Branch) (S164)	(West Sussex County Boundary, Haslemere)
Royal Brook (S150)	(Park Lane to Witley Park via Brook)

Table 1. Critical Ordinary Watercourses designated as Main Rivers with effect from 1st April 2006

ANNEXE 2

Environment Agency – Local Flood Warning Plan – August 2008

The EA have produced a Flood Warning Plan for the Surrey local authority area.

The EA flood warning service aims to reduce risk to life, distress to people and damage to property caused by flooding by providing accurate, timely flood warnings. Anyone living in a Flood Warning Area can receive a warning by phone, text or email.

The EA use flood maps, local flooding history, monitoring stations and weather forecasts to predict flooding. The following tables give details of the flood warning areas, a brief flooding history, the number of properties involved and the probability of flooding in any one year.

Flood warning area	Number of properties in area	Probability of flooding in any one year	Year	Flooding history
Farnham – Crosby Way, Mead lane, Downing Street, Long Bridge (A287), Victoria Road, Union Road, South Street and Weybank Close.	642	20%	2006	Following intense rainfall over a short period there was flooding of 10 properties in Farnham due to a combination of surface water and fluvial flooding.
			2000	Extensive catchment wide flooding.
			1968	Widespread flooding in the area resulted in a number of roads being affected in Farnham.
Waverley Abbey – Waverley Lane				

Table 2. River Wey at Farnham and Waverley Abbey

Flood warning area	Number of properties in area	Probability of flooding in any one year	Year	Flooding history
Isolated properties between Passfield and Tilford	34	1.3%	2000	Frensham Mill and Forge Road, Kingsley were both effected.

Table 3. River Wey at Frensham and Millbridge

Flood warning area	Number of properties in area	Probability of flooding in any one year	Year	Flooding history
Tilford Green, Tilford Road and Whitmead Lane	6	20%	2000	Roads were flooded in Tilford.
			1999	Some localised flooding occurred over the Christmas period.
			1968	Roads were flooded in Tilford.

Table 4. River Wey at Tilford

Flood warning area	Number of properties in area	Probability of flooding in any one year	Year	Flooding history
Elstead – Farnham Road and Shackleford Road Eashing	29	20%	2000	Reports of property flooding in Eashing.
			1999	Some localised flooding over the Christmas period.
			1968	Reports of property flooding at the Hollow in Eashing. Roads were flooded in Elstead.

Table 5. River Wey at Elstead and Eashing

Flood warning area	Number of properties in area	Probability of flooding in any one year	Year	Flooding history
Godalming – Peperharow Road, Charterhouse Road, Chalk Road, Borough Road, Bridge Road, Meadow, Blackburn Way, Waterside Close, Catteshall Road, Wey Court, Watts Close, Lammas Road, Wey Road and Meadow/Guildford Road (A3100). Peasmarsh Shalford	693	2%	2000	Large areas of Godalming including Catteshall Road, Borough Road, Meadow and Bridge Road were flooded.
			1999	Some localised flooding occurred over the Christmas period.
			1968	Reports of property flooding in Peasmarsh. Roads were flooded in Godalming.

Table 6. River Wey at Godalming, Peasmarsh and Shalford

Flood warning area	Number of properties in area	Probability of flooding in any one year	Year	Flooding history
Taylors Crescent, Woodland Avenue, Ewhurst Road, New Park Road, Hesketh Close, Mead Road, Mead Close, King's Road, Queensway, Redcroft Walk, Horsham Road, Overford Drive, Charts Close, Village Way, John Wiskar Road and Alfold Road.	677	1%	2000	Flooding in Cranleigh from the Littlemead Brook.
			1968	Extensive catchment wide flooding.

Table 7. Littlemead Brook at Cranleigh

Flood warning area	Number of properties in area	Probability of flooding in any one year	Year	Flooding history
Elmbridge Village – Clarke Place, Forest Walk, Jackson Close and Loxford Court Isolated properties on Elmbridge Road and around Shamley Green.	76	10%	1968	Extensive catchment wide flooding.

Table 8. Cranleigh Waters near Cranleigh and Shamley Green

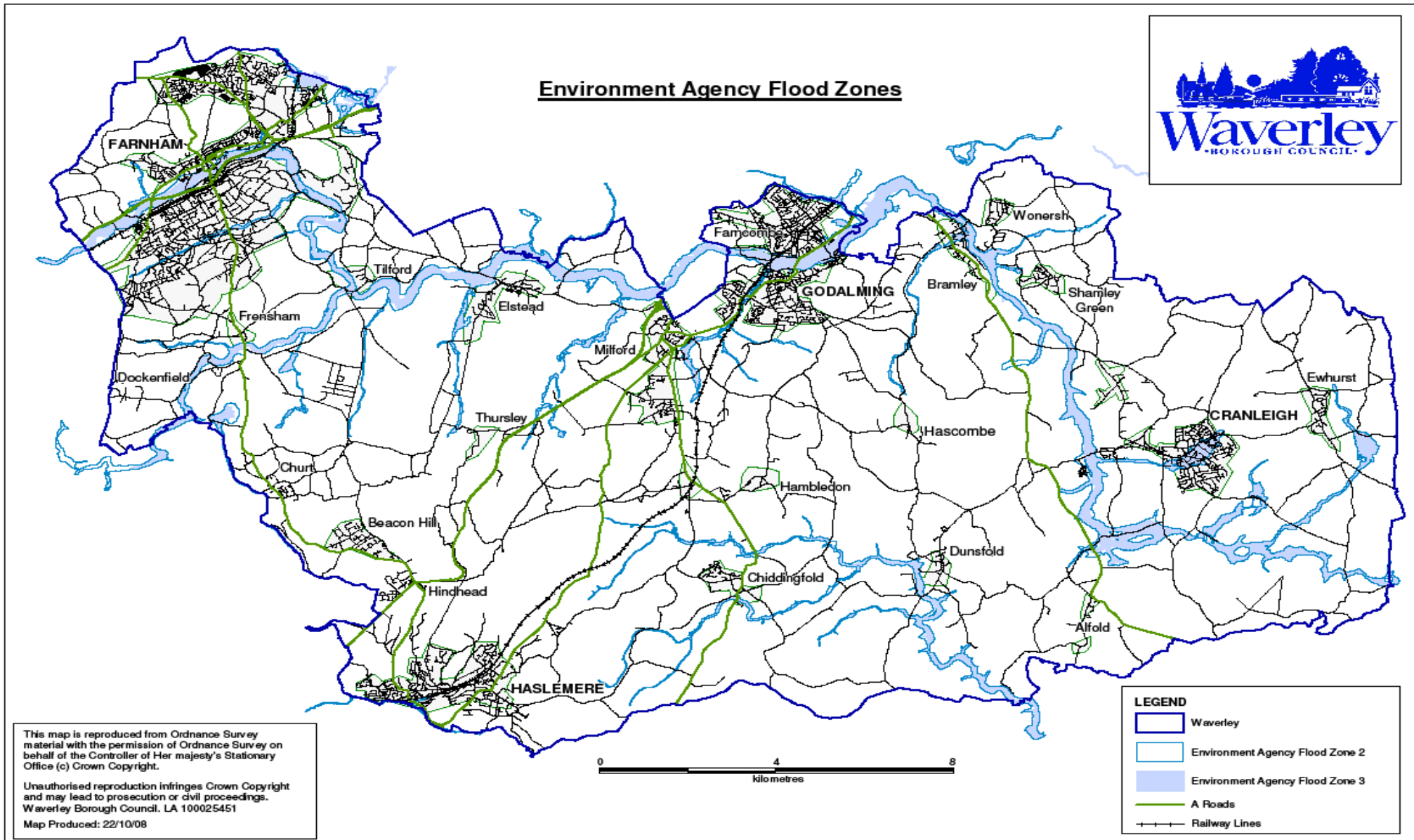
Flood warning area	Number of properties in area	Probability of flooding in any one year	Year	Flooding history
Linersh Wood, Barton Road, Fisher Rowe Close, Station Road, Stantons Wharf, Eastwood Road and Tanyard Lane.	105	20%	2003	Flooding in Bramley.
			2000	Flooding in Bramley.
			1968	Extensive catchment wide flooding.

Table 9. Cranleigh Waters at Bramley

ANNEXE 3



Environment Agency Flood Zones



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Map Produced: 22/10/08

LEGEND

- Waverley
- Environment Agency Flood Zone 2
- Environment Agency Flood Zone 3
- A Roads
- Railway Lines

Civil Emergency Scheme Potential Rest Centres – at March 2008

