# **Public Document Pack**



# **AGENDA**

# SWALE JOINT TRANSPORTATION BOARD MEETING

Date: Monday, 8 September 2014

Time: 5.30 pm

Venue: Council Chamber - Swale House

## Membership:

Councillors Bryan Mulhern, Prescott, Ken Pugh, Pat Sandle, Ghlin Whelan, Mike Whiting (Vice-Chairman) and Tony Winckless.

#### **Kent County Council Members:**

Kent County Councillors Mike Baldock, Bowles, Lee Burgess, Adrian Crowther, Tom Gates (Chairman), Harrison and Roger Truelove.

#### **Parish Council Members:**

Kent Association of Local Council's representatives: Keith Johnson (Bobbing Parish Council), Peter Macdonald (Minster Parish Council) and Richard Palmer (Newington Parish Council).

Quorum = 5 (2 from each Council and 1 Parish representative).

#### **RECORDING NOTICE**

Please note: this meeting may be recorded.

At the start of the meeting the Chairman will confirm if all or part of the meeting is being audio recorded. The whole of the meeting will be recorded, except where there are confidential or exempt items.

You should be aware that the Council is a Data Controller under the Data Protection Act. Data collected during this recording will be retained in accordance with the Council's data retention policy.

Therefore by entering the Chamber and speaking at Committee you are consenting to being recorded and to the possible use of those sound recordings for training purposes.

If you have any queries regarding this please contact Democratic Services.

1. Apologies for absence and confirmation of substitutes

#### 2. Minutes

To approve the Minutes of the Meeting held on 9 June 2014 (Minute Nos. 64 - 75) as a correct record.

Meeting of Swale Joint Transportation Board on Monday, 9th June, 2014

#### 3. Declarations of Interest

Councillors should not act or take decisions in order to gain financial or other material benefits for themselves or their spouse, civil partner or person with whom they are living with as a spouse or civil partner. They must declare and resolve any interests and relationships.

The Chairman will ask Members if they have any interests to declare in respect of items on this agenda, under the following headings:

- (a) Disclosable Pecuniary Interests (DPI) under the Localism Act 2011. The nature as well as the existence of any such interest must be declared. After declaring a DPI, the Member must leave the meeting and not take part in the discussion or vote. This applies even if there is provision for public speaking.
- (b) Disclosable Non Pecuniary (DNPI) under the Code of Conduct adopted by the Council in May 2012. The nature as well as the existence of any such interest must be declared. After declaring a DNPI interest, the Member may stay, speak and vote on the matter.

Advice to Members: If any Councillor has any doubt about the existence or nature of any DPI or DNPI which he/she may have in any item on this agenda, he/she should seek advice from the Director of Corporate Services as Monitoring Officer, the Head of Legal or from other Solicitors in Legal Services as early as possible, and in advance of the Meeting.

#### 4. Public Session

Members of the public have the opportunity to speak at this meeting. Anyone wishing to present a petition or speak on this item is required to register with the Democratic Services Section by noon on Friday 5 September 2014. Questions that have not been submitted by this deadline will not be accepted. Only two people will be allowed to speak on each item and each person is limited to asking two questions. Each speaker will have a maximum of three minutes to speak.

Petitions, questions and statements will only be accepted if they are in relation to an item being considered at this meeting.

## Part One - Reports for recommendation to Kent County Council's Cabinet

_	01		:
5.	Sheppey	' Cross	ina

To consider a request from Councillor Pat Sandle and Leysdown Parish Council to review safety measures for the Sheppey bridge – notably a reduction in speed limit and speed cameras.

6. Sittingbourne Northern Relief Road - update

1 - 2

To consider an update on the Northern Relief Road Scheme.

7. Lower Road Junction with Barton Hill Drive, Isle of Sheppey

3 - 4

To consider the traffic management options that are suitable for this junction.

# Part Two - Reports for recommendation to Swale Borough Council's Cabinet

8. Lansdowne Primary School, Gladstone Drive, Sittingbourne

To consider the options that could be put in place to address safety issues outside Lansdowne Primary School.

9. Preston Avenue, Faversham - Proposed extension of double yellow lines

5 - 12

To consider the report which provides a summary of a recent consultation carried out for the proposed extension to existing waiting restrictions in Preston Avenue, Faversham.

#### Part Three - Information Items

10. Highway Works Programme 2014/15

13 - 36

Members are asked to note the report on the identified schemes approved for construction in 2014/15.

11. Christmas/New Year 2013-14 Storms and Floods - Final Report

37 - 62

Members are asked to note the report, submitted to Kent County Council Cabinet on 7 July 2014, which sets out a full review of lessons learned from the Christmas/New Year 2013-14 storms and flooding and makes recommendations for how the County Council, in collaboration with its partners, can be better prepared to manage such future events and flood risk.

12. Progress Update Report

63 - 66

Members are asked to note the Progress Update which outlines progress made following recommendations and agreed action at previous meetings.

# Issued on Tuesday 26 August 2014

The reports included in Part I of this agenda can be made available in alternative formats. For further information about this service, or to arrange for special facilities to be provided at the meeting, please contact DEMOCRATIC SERVICES on 01795 417330. To find out more about the work of the Swale JTB, please visit www.swale.gov.uk

Corporate Services Director, Swale Borough Council, Swale House, East Street, Sittingbourne, Kent, ME10 3HT TO: SWALE JOINT TRANSPORTATION BOARD

DATE: 8 September 14

SUBJECT: Sittingbourne Northern Relief Road

BY: KCC Head of Transportation and Development

Classification: Unrestricted

**Summary:** An update on the Northern Relief Road Scheme

**Decision Required:** For information

#### Introduction

1. This report has been brought at the request of this Board at its last meeting in June.

#### **Discussion**

- 2. The northern relief road was discussed at the Joint Transportation Board in December 2011 a few days prior to the opening of the creek crossing.
- 3. The northern relief road has now been open for nearly 3 years and provides a high quality, strategic route from the M2 and A249 to the employment sites at Eurolink Way in north east Sittingbourne. It carries approximately 1100 vehicles in the am peak and 1350 in the pm peak. For comparison, Mill Way carries 1800 vehicles in the am and pm peaks.
- 4. Public consultation carried out in 2010 on the possibility of extending the northern relief road to the A2 at Bapchild received a mixed reaction, and it was agreed that the scheme should be considered within the then emerging Local Development Framework as part of an area action policy. Within the current plan the proposed route of the northern relief road is indicated as an area of search. Modelling carried out at that time showed that completing the route through to the A2, the Bapchild link, would provide relief in the future to congestion in the town centre and would support new development.
- 5. Funding was sought for the completion of the route to the A2 through the south eastern Local Enterprise Partnership (LEP). The results of all of the bids were announced in July and this scheme was not successful.
- 6. More transport modelling has been commissioned following the opening of the northern relief road as it was felt that this was a significant change to the road network which had the opportunity to alter driving patterns. The current transportation modelling builds on some of the work that was carried out previously, albeit some of the spatial planning assumptions have changed. A Do Minimum option has been modelled as this shows the effect of general background growth without any strategic allocations.
- 7. The current model shows that although there would be some relief to the A2 east of Sittingbourne by the construction of the Bapchild link, the traffic flows do not provide justification by themselves. However, the link road would offer the opportunity for further redesign of the highway space in the town centre prompting further regeneration schemes, removing traffic from the air quality management area in East Street, and removing through traffic from Lomas Road.

8. The results of the current modelling work need to be taken in context with the emerging transport strategy and Local Plan which will be reported in full to the LDF Panel towards the end of September.

## **Financial Implications**

- 9. It is difficult to see how the scheme can be funded without a substantial proportion of the cost coming from public funds. This is unlikely as explained in paragraph 5.
- 10. The Development allocations in eastern Sittingbourne are unlikely to be able to fund the link road entirely, and the viability of developments in Swale generally will not support a high Community Infrastructure Levy at present.

#### **Decision Required**

11. This report is presented for Members' information.

Contact Officer: Ruth Goudie, Strategic Transportation Planner, KCC Highways.

TO: SWALE JOINT TRANSPORTATION BOARD

DATE: 8 September 14

SUBJECT: Lower Road junction with Barton Hill Drive

BY: KCC Head of Transportation and Development

Classification: Unrestricted

**Summary:** A discussion of the traffic management options that are suitable for

this junction.

**Decision Required:** For information

#### **Introduction**

1. KCC Highways receives a considerable number of complaints about the performance of this junction, and at the last meeting of this Board in June a report was presented on a proposal to improve capacity at the junction by banning the right turn from Lower Road into Barton Hill Drive. The recommendation from the Board was to design a mini roundabout or full sized roundabout to replace the traffic signals at the junction.

#### **Discussion**

- 2. Mini roundabouts are designed for tight urban environments where traffic speeds are likely to be low and the requirements for deflection can be reduced as the roundabout acts as a mechanism for motorists giving way in turn.
- 3. At Lower Road the speed limit drops from national limit to 40mph just to the west of the junction with Barton Hill Drive. Both of the Lower Road approaches to the junction are straight, and at lightly trafficked times of the day, would be fast. This environment is not suitable for a mini roundabout:
- 4. Design guidance from the Department for Transport is that mini roundabouts should not be provided where the speed limit is higher than 30mph. Although there have been locations where a 30mp speed limit has been extended to cover the location of a mini roundabout, this is frequently not successful in lowering speeds sufficiently. At this location it would require the speed limit to be extended in Barton Hill Drive. Thistle Hill and the length of Lower Road between and either side of these two junctions along a length of road that does not meet the criteria for a 30mph limit.
- 5. In order to provide sufficient deflection to operate safely, a mini roundabout would require the acquisition of third party land so that the roundabout can be offset to remove the straight through movement. Without this any design would be most unlikely to pass a safety audit.
- 6. It would therefore be more suitable to design a "small roundabout" with a solid central island to match the one at the junction of Lower Road and Thistle Hill Way, 400m to the east which deals with a similar volume of traffic. The roundabout can be offset to the south to provide suitable deflection and would require land acquisition. A feasibility design for this has been prepared with an estimated cost of around £200,000 plus the cost of the necessary third party land.
- 7. It is possible that future development allocations at Thistle Hill could be required to fund a solid island roundabout at this location as part of their mitigation. However this may be a medium or long term solution, and therefore, in the interim a bid has been

put forward for funding from the block capital allocation for Local Transport Plan (LTP) schemes to try to bring forward a roundabout solution at this junction. However, in the current financial climate and reduction in budgets, the LTP funding is mainly targeted to Safety Critical schemes and as this location has a good safety record it would be unlikely to be a high priority for funding.

#### **Financial Implications**

- 8. At present there is no funding for a roundabout construction scheme. The outcome of the bid for funding from the LTP schemes block capital allocation should be known In September, and if successful it would allow the design and delivery of the scheme to be brought forward.
- 9. If the LTP bid is not successful the roundabout could potentially be funded by a suitable scale of enabling development from the two strategic housing land allocations in the Local Plan.

## **Decision Required**

10. This report is for Members' information.

Contact Officer: Ruth Goudie, Strategic Transportation Planner, KCC Highways.

SWALE JOINT TRANSPORTATION	Agenda Item:
BOARD	

<b>Meeting Date</b>	Monday 8 <sup>th</sup> September 2014
Report Title	Proposed Extension to Waiting Restrictions – <b>Preston Avenue, Faversham</b>
<b>Cabinet Member</b>	Cllr David Simmons
SMT Lead	Brian Planner
<b>Head of Service</b>	Brian Planner
Lead Officer	Brett O'Connell
Classification	Open

Recommendations	Members are asked to consider the objections/comments made by the consultees and
	recommend that waiting restrictions are installed as per the consultation plan.

# **Purpose of Report and Executive Summary**

1.1 This report provides a summary of a recent consultation carried out for the proposed extension to existing waiting restrictions in Preston Avenue, Faversham.

# 2 Background

- 2.1 The consultation has been undertaken with residents and statutory consultees in relation to the extension of existing waiting restrictions in the near vicinity of 38 Preston Avenue. These proposals have come via a request from a resident.
- 2.2 A copy of the consultation material for the proposals can be found in Annex A.

#### 3 Issue for Decision

3.1 Details of the consultation results can be found in Annex B.

## 3.2 <u>Preston Avenue, Faversham</u>

A request has been received from a resident for the extension of existing parking restrictions at this location to improve visibility and vehicle movements.

It was stated that the existing double yellow lines on the southern side of the carriageway at the bend near 38 Preston Avenue were too short and needed extending.

Reports suggest that vehicles travelling in a westerly direction from Bramley Avenue negotiate the bend only to find a vehicle parked at the end of the restrictions,

therefore, causing the travelling vehicle into the middle of the carriageway into possible oncoming vehicles travelling north in Preston Avenue.

An extension to the restrictions would make it safer by not allowing parked vehicles so close to the exit of the bend, therefore, giving vehicles travelling from Bramley Avenue more time to adjust their position in the carriageway and giving way to oncoming traffic if needed.

A consultation was carried out in July 2014 proposing to extend the existing double yellow lines as per the consultation plan. Of the residents consulted 8 supported the proposals, 2 objected and 3 were undecided.

Members are asked to consider the results of this consultation and recommend that Officers proceed with the extension of double yellow lines as per the consulted plan.

# 4 Implications

Issue	Implications
Corporate Plan	Improving Community Safety through safer Highways.
Financial, Resource and Property	Costs associated with Traffic Regulation Order, and necessary lining.
Legal and Statutory	Traffic Regulation Orders to be made.
Crime and Disorder	None at this stage.
Risk Management and Health and Safety	None identified at this stage.
Equality and Diversity	None identified at this stage.
Sustainability	None identified at this stage.

# 5 Appendices

- 5.1 The following documents are to be published with this report and form part of the report
  - Annex A Copy of the consultation material
  - Annex B Copy of the consultation responses and results

# 6 Background Papers

6.1 None.



# Swale House, East Street, Sittingbourne, Kent ME10 3HT

DX59990 Sittingbourne 2 Phone: 01795 417850 Fax: 01795 417141 www.swale.gov.uk



Making Swale a better place

Resident/Occupier

Please ask for:

**Brett O'Connell** 

**Direct Line:** 

01795 417061

Fax:

01795 417477

E-mail:

brettoconnell@swale.gov.uk

Our Ref:

Date:

27<sup>th</sup> June 2014

# Preston Avenue, Faversham - Proposed Double Yellow Line Extension

Dear Resident/Occupier

A request was received from a resident to investigate the possibility of extending the parking restrictions in Preston Avenue as per the enclosed plan

Swale Borough Council was informed that vehicles park at this location causing vehicles travelling from Bramley Avenue to move out to the wrong side of the road into oncoming traffic.

The proposed restrictions will improve vehicle movements at this location.

If you would like to comment on the proposals then please fill out the enclosed form and state whether you object, support or are undecided. Please return the comments form by **Monday 21**<sup>st</sup> **July 2014**. The results of the consultation will be submitted to the Joint Transportation Board meeting in September 2014 for a recommendation.

Alternatively, you can e-mail your comments to brettoconnell@swale.gov.uk, please state whether you support or object to the proposals. If you would like to know the outcome of the consultation please contact me by email or on 01795 417061 after the closing date.

Yours Sincerely

Brett O'Connell

Brett O'Connell Assistant Engineer







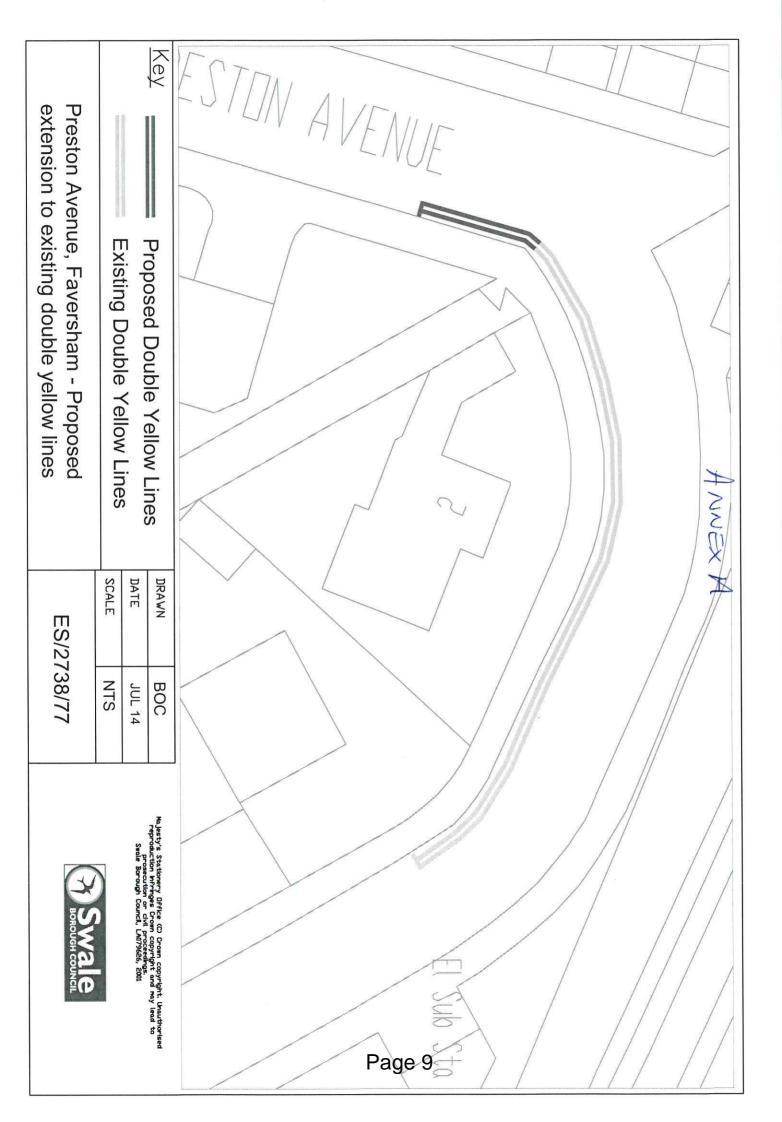


# ANNEX A

To: Brett O'Connell, Assistant Engineer, Technical Services, Swale Borough Council, Swale House, East Street, Sittingbourne ME10 3HT

# Proposed Extension to Double Yellow Lines - Preston Avenue, Faversham Please tick one box only I support the proposal. I object to the proposal. I am undecided. Comments/suggestions: Name & Address, including post code (for geographical analysis purposes only):

Closing Date 21st July 2014





# **ANNEX B**

# Preston Avenue, Faversham – Extension to Existing Parking Restrictions Objectors comments and response

Comment No.	Objectors Comments	Response
1	We have lived at the bottom of Preston Avenue for over 25 years; the problem is the people living on the estate treating the road as a race track. Cars have crashed into the British Rail fence by driving too fast. Yellow lines will not help but a speed ramp would calm the situation.	Kent County Council are the Highway Authority that install traffic calming schemes not Swale Borough Council.
2	At present the traffic coming from Bramley Avenue does tend to slow down at the corner.	The proposals will improve visibility and vehicle movements at this location.

This page is intentionally left blank

# Agenda Item 10

**To:** Swale Joint Transportation Board

By: KCC Highways and Transportation

Date: 8<sup>th</sup> September 2014

**Subject**: Highway Works Programme 2014/15

Classification: Information Only

Summary: This report updates Members on the identified schemes approved for construction in 2014/15

#### 1. Introduction

This report provides an update and summarises schemes that have been programmed for delivery in 2014/15.

Footway and Carriageway Improvement Schemes - see Appendix A

Drainage Repairs & Improvements – see Appendix B

Street Lighting - see Appendix C

Traffic Systems - see Appendix D

**Developer Funded Works** – see Appendix E

Transportation, PROW and Safety Schemes – see Appendix F

Public Rights of Way - see Appendix G

Bridge Works - see Appendix H

#### Conclusion

1. This report is for Members information.

#### **Contact Officers:**

The following contact officers can be contacted on 03000 418181

Toby Howe Highway Manager (East)
Alan Blackburn Swale District Manager

Neil Tree Carriageway Surface Treatment
Russell Boorman Carriageway Machine Surfacing
Wendy Bousted Footway Improvement Team Leader

Katie Lewis Drainage Manager
Sue Kinsella Street Lighting Manager

Toby Butler Intelligent Transport Systems Manager Richard Heaps/Melvyn Twycross Transportation, PROW and Safety Schemes

Tony Ambrose Structures Manager
Bob White Developer Funded Works

# <u>Appendix A – Footway and Carriageway Improvement Schemes</u>

The delivery of these schemes is weather dependent; should it prove not possible to carry out these works on the planned dates, new dates will be arranged and the residents will be informed by a letter drop to their homes.

Surface Treatments - Contact Officer Neil Tree			
Micro Asphalt Scheme	es		
Road Name	Parish	Extent of Works	Current Status
Eastling Road	Painters Forstal	From its junction with Green Lees to its junction with Bayfield Cottages	Completed
Whitstable Road	Faversham	From its junction with Love Lane to its junction with East Street	Completed
Orchard Place	Faversham	From its junction with Whitstable Road to its junction with East Street	Completed
Selling Court	Selling	Whole length	Completed
Ruins Barn Road	Tunstall	From its junction with Hawks Hill Lane to its junction with Cromer Road	Completed
Vicarage Lane	Ospringe	From its junction with Eastling Road to its junction with Water Lane	Completed
The Street	Boughton under Blean	From its junction with Bull Lane to its junction with Staplestreet Road	Completed
Rushenden Road	Queenborough	From its junction with Manor Way to its junction with Thompsett Way	Completed
Hillside Avenue	Queenborough	From its junction with Manor Way to its junction with Swale Avenue	Completed
Harps Avenue	Minster	From its junction with B2008 Minster Rd to its junction wtih Scocles Road	Completed
Gore Court Road	Sittingbourne	From its junction with Ufton Lane to its junction with Park Avenue	Completed

Chalk Road	alk Road Queenborough Whole Length		Completed	
Surface Dressing Sche	emes – Contact Officer Ne	il Tree		
Road Name	Parish	Extent of Works	Current Status	
Barton Hill Drive	Minster	From its junction with Plover Road to its junction with B2231 Lower Road	Completed	
Whiteway Road	Queenborough	From its junction with Brielle Way to the old fire station	Completed	
Water Lane	Ospringe	From its junction with Painters Forstal Road to its junction with Ospringe Street	Completed	
Selling Road	Selling	From its junction with Crouch Lane to its junction with Perry Wood	Completed	
Homestall Road	Faversham	From its junction with Whitstable Road to its junction with A2 London Road	Completed	
Hawks Hill Lane	Tunstall	From its junction with Bashford Barn Lane to its junction with Bexon Lane	Completed	
Park Avenue	Sittingbourne	From its junction with Bradley Park to its junction with Gore Court Road	Completed	
Selling Road	Faversham	From its junction with M2 Bridge to its junction with A2 Canterbury Road	Completed	
Swanton Street	Bredgar	From its junction with Bexon Lane to its junction with Blind Mary's Lane	Completed	
Kenneling Road	Stalisfield	From its junction with Church Road to its junction with Stalisfield Road	Completed	
Chestnut Street	Borden	From its junction with Key Street Roundabout to its junction with A249 roundabout	Completed	
Warden Road	Eastchurch	From its junction with Thorn Hill Road to its junction with Plough Road	Completed	

Machine Resurfacing – Contact Officer Russell Boorman			
Road Name	Parish	Extent of Works	Current Status
Sheppey Way, Key Street Interchange	Bobbing	Key Street roundabout northbound for 50m	Programmed to start 22/08/14 for one day
B2231 Rowetts Way Rdbt	Eastchurch	Circulatory carriageway	Programmed to start 11/09/2014
A2 London Road	Tonge	Junction with Hempstead Lane	Programmed to start 15/08/14 - 18/08/14
A2 East Street	Sittingbourne	From its junction with East Street roundabout to its junction with Gaze Hill Avenue	Programmed to start 21/08/14 - 26/08/14
A251 Ashford Road	Sheldwich	From its junction with Porters Lane to its junction with Tin Tops	Completed
A251 Ashford Road	Faversham	Fire station to No. 97 Ashford Road	Programmed to start 28/10/2014
Crown Road	Sittingbourne/Milton	Whole length	Programmed to start 21/10/14 - 22/10/14
The Broadway	Minster on Sea	Marine Parade to South of Wards Hill Road	Programmed to start 22/09/14 - 25/09/14
The Broadway	Minster on Sea	South of Wards Hill Road to Saxon Avenue	Programmed to start Autumn 2014
Dargate Road	Hernhill / Dunkirk	From its junction with Courtney Road to 500m from junction	Programmed to start Summer/Autumn 2014
Barton Hill Drive	Minster on Sea	From its junction with Plover Road to its junction with Minster Road	Programmed to start Autumn 2014
Ringlestone Road (Torry Hill /Old Lenham Road)	"Doddington (Milsted) (Wichling)"	Adjacent to Wichling PS to woodyard	Programmed to start Summer/Autumn 2014
A2 London Road	Sittingbourne	From its junction with Cryalls Lane to Reynolds Gym	Programmed to start 26/09/14 - 30/09/14

Footway Improvement - Contact Officer Wendy Boustead			
Road Name	Parish	Extent and Description of Works	Current Status
Queenborough Road	Sheerness/Queenborough	Between Neats Court Farm and Neatscourt Cottages - Replacement of tarmac surface and kerbing where required	Programmed to start Autumn 2014 for eight weeks
Queenborough Road	Queenborough	Between Main Road and Halfway Road – Replacement of tarmac surface and kerbing where required.	Programmed to start 02/09/2014 for five weeks
Mill Hill	Minster on Sea	Between St George's Primary School and Oak Lane - Replacement of tarmac surface and kerbing where required	Programmed to start 11/11/2014 for five weeks
Lower Road	Faversham	Whole Length - Replacement of tarmac surface and kerbing where required	Programmed to start 15/09/14 for thirteen weeks
Johnson Way	Minster on Sea	Whole Length - Replacement of tarmac surface and kerbing where required	Completed
Knightsfield Road	Sittingbourne	From its junction with The Meads Avenue to its junction with Quinton Road - Slurry Surfacing	Programmed to start 11/09/14 - 17/09/14
Ashford Road	Sheldwich Badlesmere Leaveland	From Shottenden Road to Lees Court Road - Slurry Surfacing	Programmed to start 22/10/14 – 25/10/14
Abbey Close	Minster on Sea	Whole Length - Slurry Surfacing	Programmed to start 17/09/14 – 23/09/14
Queenborough Road	Queenborough	Sections between Main Road and Halfway Road – Slurry Surfacing	Programmed to start Autumn 2014

# Appendix B - Drainage Repairs & Improvements

Location	Description of Works	Job Status	Timescale for Completion
Otterham Quay Lane	Installation of new drainage system	Works Completed	
Lower Hartlip Road, Hartlip	Dredge Pond and bank protection	Works Commenced	Autumn 2014
Tunstall Road, Tunstall	Installation of new soakaways and additional drainage	Works Commenced	Autumn 2014
Deans Bottom, Bredgar	Installation of new gullies and soakaways	Works Commenced	Autumn 2014
South Street, Selling	Installation of new soakaways and additional drainage	Works Completed	
South Bush Lane, Upchurch	Installation of new Soakaways	Investigation and Design underway	Autumn 2014
Scragged Oak Road, Detling	Installation of new soakaway and deep bore	Works Programmed	Autumn 2014
Slough Road, Rodmersham	Installation of Soakaways	Works Completed	
Warden Road, Eastchurch	Installation of new pond	Investigation and Design underway	Autumn 2014
High Street, Sittingbourne	Repair Works	Works Programmed	Autumn/ Winter 2014
Boxted Lane, Newington	Installation of new soakaways and additional drainage	Investigation and Design underway	Autumn/ Winter 2014
Park Road, Sittingbourne	Installation of new soakaways	Investigation and Design underway	Autumn/ Winter 2014
High Street, Eastchurch	Installation of sumpless gullies discharging to catchpit in layby to ease future maintenance and provide improved system flow capacity	Investigation and Design underway	Autumn/ Winter 2014
Claxfield Road, Lynstead	Installation of French drain	Investigation and Design underway	Autumn/ Winter 2014

# Appendix C - Street Lighting

Following Structural testing, this year's column replacement budget will be used to replace columns deemed as high risk.

Street Lighting Column Replacement – Contact Officer Sue Kinsella				
Road Name	Column Ref	Location	Status	
Mill Way	EMDL014	SIDE OF INDUSTRIAL UNIT BEFORE TRINITIY WAY JUNCTION	COMPLETED	
Mill Way	EMDL015	OPPOSITE TRINITY WAY JUNCTION	COMPLETED	
Seaview Avenue	ESII003	OUTSIDE 10 / 12	COMPLETED	
Shortlands Road	ESCL012	OPPOSITE COWPER ROAD JUNCTION	COMPLETED – Old Column Awaiting Takedown	
Addington Road	EAAI508, EAAI509, EAAI512	VARIOUS LOCATIONS	COMPLETED	
All Saints Road	EAAR006	O/S 48/50	COMPLETED	
Auckland Drive	EABT005	S/O 1 RUSSELL CLOSE	COMPLETED	
Berkeley Court	EBBY009	O/S 43	COMPLETED	
Broom Road	EBET003	O/S 5 / 8	COMPLETED	
Chalkwell Road	ECGI509	O/S 118 / 120	COMPLETED	
Laxton Way	ELAJ501	J/W VICARAGE ROAD	COMPLETED	
Murston Road	EMDE505	O/S 28 / 30	COMPLETED	
Ospringe Road	EOBQ501	R/O 10 OSPRINGE STREET	COMPLETED	
Prince Charles Avenue	EPCK003, EPCK008	VARIOUS LOCATIONS	COMPLETED	
South Avenue	ESDC510	O/S 55	COMPLETED	
St Georges Avenue	ESEA515	OPPS 202	COMPLETED	
St Michaels Road	ESGV504	OPPS J/W DOVER STREET	COMPLETED	
The Street	ETBI503, ETBI504, ETBI703,	VARIOUS LOCATIONS	COMPLETED	

Page 20

	ETBI705		
Highsted Road	EHEB009	O/S 35	Awaiting Programme Date.
Ypres Drive	EYAC014	OPP MENIN ROAD	Awaiting Programme Date
Park Road	EPAJ015	OUTSIDE 151 / 153	Attended to on 12.05.14 – Traffic Management required due to parked cars and busy nature of road. To be Re- Programmed
London Road	ELCN002	OPP16	Sunday Working - TM Required – Awaiting Programme Date
London Road	ELCN009	OPP 1	Sunday Working - TM Required – Awaiting Programme Date
St Michaels Road	ESGW014	ADJ CROWN QUAY LANE	Sunday Working - TM Required – Awaiting Programme Date
St Michaels Road	ESGW015	O/S CAR PARK	Sunday Working - TM Required – Awaiting Programme Date
St Michaels Road	ESJE002	O/S STATION	Sunday Working - TM Required – Awaiting Programme Date
St Michaels Road	ESJE003	O/S STATION CAR PARK	Sunday Working - TM Required – Awaiting Programme Date
St Michaels Road	ESJF001	J/W DOVER STREET	Sunday Working - TM Required – Awaiting Programme Date
Back Lane	EBAB002	OPPOSITE HIGH STREET	Column Installed, UKPN Connection Required Due to Mains Access Issues
Boyces Hill	EBFY002	NEAR BROW OF HILL	TM Required – Awaiting Programme Date
Boyces Hill	EBFY004	NEAR BROW OF HILL	TM Required – Awaiting Programme Date
London Road	ELBG022	OUTSIDE VERNON DALE	TM Required – Awaiting Programme Date
London Road	ELBG023	OPPOSITE TUCK INN CAFE	TM Required – Awaiting Programme Date

London Road	ELBG031	ON BROW OF HARTLIP HILL	TM Required – Awaiting Programme Date
London Road	ELBG041	ON GRASS VERGE RH SIDE TOWARDS RAINHAM	TM Required – Awaiting Programme Date
Lower Road	ELBX057	OUTSIDE RUGBY CLUB	TM Required – Awaiting Programme Date
London Road	ELCN036	OUTSIDE GORE COURT CRICKET CLUB	TM Required – Awaiting Programme Date
London Road	ELCN038	OUTSIDE GORE COURT CRICKET CLUB	TM Required – Awaiting Programme Date
London Road	ELCN039	OUTSIDE GORE COURT CRICKET CLUB / OPPOSITE WISES LANE JUNCTION	TM Required – Awaiting Programme Date
London Road	ELDI004	OUTSIDE 25 / 27	TM Required – Awaiting Programme Date
London Road	ELDI024	OPPOSITE CAR WASH GARAGE	TM Required – Awaiting Programme Date
Murston Road	EMDE001	OPPOSITE KEBAB HOUSE / PUBLIC HOUSE	Sunday Working & TM Required – Awaiting Programme Date
Murston Road	EMDE003	OPPOSITE WOODLAND ROAD	Sunday Working & TM Required – Awaiting Programme Date
Beaconsfield Road	EBBF451	O/S 50 ON FOOTPATH TO LANSDOWN ROAD	Column Installed, awaiting electrical connection.
Bobbing Hill	EBHT099	O/S 9 / 11	Column Installed, awaiting electrical connection.
Borden Lane	EBCR003, EBCR004, EBCR008, EBCR009, EBCR011, EBCR015, EBCR016, EBCR020, EBCR022, EBCR027, EBCR029	VARIOUS LOCATIONS	All completed apart from EBCR013, EBCR020, EBCR022 which are currently awaiting electrical connections.
Bridgewater Road	EBHD009	OPPS J/W MONTAGUE COURT	Column Installed, awaiting electrical connection.

	1	1	<u> </u>
Buttermere	EBFN001, EBFN002	VARIOUS LOCATIONS	Columns Installed, awaiting electrical connection.
Castle Rough	ECAO003, ECAO005	VARIOUS LOCATIONS	Columns Installed, awaiting electrical connection.
Cecil Avenue	ECAT301	REAR OF NO 1	Column Installed, awaiting electrical connection.
Church Road	ECGN301	SIDE OF FIRE STATION	Column Installed, awaiting electrical connection.
Church Street	ECCR002, ECCR003	VARIOUS LOCATIONS	Columns Installed, awaiting electrical connection.
Cowper Road	ECEK501	O/S 55	Sign Posts Installed, awaiting electrical connections.
Cremers Road	ECHZ004	END OF CUL-DE-SAC	Column Installed, awaiting electrical connection.
Crown Quay Lane	ECFI009	OPPS J/W WHARF ROAD	Column Installed, awaiting electrical connection.
Davie Close	EDAK002, EDAK004	VARIOUS LOCATIONS	Columns Installed, awaiting electrical connection.
Doubleday Drive	EDBK006	O/S 24	Column Installed, awaiting electrical connection.
Dunedin Close	EDBV001, EDBV002	VARIOUS LOCATIONS	Columns Installed, awaiting electrical connection.
Emerald View	EBBA014	O/S SUNRAY	Column Installed, awaiting electrical connection.
Estuary Road	EEBE006	O/S 70 / 72	Column Installed, awaiting electrical connection.
Fern Walk	EFAM302	O/S FLATS 20 / 26	Column Installed, awaiting electrical connection.
Fonblanque Road	EFBJ504	S/O 76 BROADWAY	Sign Posts Installed, awaiting electrical connections.
George Street	EGAK352	R/O 33 CANTERBURY ROAD	Column Installed, awaiting electrical connection.
Glebe Lane	EGAR007, EGAR008, EGAR009, EGAR013, EGAR302	VARIOUS LOCATIONS	Columns Installed, awaiting electrical connection.

Page 23

		1	
	E005000	REAR OF 15 / 17 FERN	Column Installed,
Gorse Road	EGBE003	WALK	awaiting electrical
		VVALK	connection.
			Column Installed,
Grovehurst Avenue	EGBW006	ADJ RECREATION	awaiting electrical
		GROUND	connection.
			Column Installed,
Harrier Drive	EHEQ001	1 <sup>ST</sup> FROM PEREGRINE	awaiting electrical
		DRIVE	connection.
			Column Installed,
Harris Gardens	EHAM352	O/S 29 / 30	awaiting electrical
			connection.
			Column Installed,
Kent Avenue	EKAE004	OPPS 32 / 34 ON LARGE	awaiting electrical
Rent Avenue	LIVALUU4	ISLAND	connection.
Kastral Olsas	EKA 1999	2 <sup>ND</sup> FROM R/O 37	Column Installed,
Kestrel Close	EKAJ302	HIGHSTED ROAD	awaiting electrical
		THORISTED NOAD	connection.
		0/0.4	Column Installed,
Kiln Close	EKAM001	O/S 1	awaiting electrical
			connection.
			Column Installed,
Leicester Gardens	ELAO001	OPPS 6	awaiting electrical
			connection.
			Column Installed,
Lower Road	ELBW099	OPPS 202	Electrical Connection
			programmed 21.08.14
			Column Installed,
Lower Road	ELCV022	OPPS 85	awaiting electrical
Zowei Rodd	2201022		connection.
			Column Installed,
Medway Road	EMBI010	O/S 37 / 39	awaiting electrical
IVIEUWAY NOAU	EIVIDIOTO	0,00,700	connection.
N. direct a surrey Assessment	EM00000	O/S 12	Column Installed,
Minterne Avenue	EMCS003	0/3 12	awaiting electrical
			connection.
		00007	Column Installed,
Mount Field	EMEI006	OPPS 7	awaiting electrical
			connection.
			Column Installed,
Mountview	EMDA001	S/O12	awaiting electrical
			connection.
			Column Installed,
New Road	ENAM033	OPPS 66 / 68	awaiting electrical
IACM IVOQU			connection.
	EOAE013,		Columns Installed,
Oak Road	EOAE014,	VARIOUS LOCATIONS	awaiting electrical
	EOAE014,		connection.
	EOAE301,		Connection.
	EOAE353		
			Column Installed,
Palmerston Walk	EPAB301	OPPS 3 ON FOOTPATH	awaiting electrical
			connection.
	<del></del>		1

Peel Drive	EPAV011	O/S 64	Column Installed, awaiting electrical
Peregrine Drive	EPBC301	R/O 30	connection. Column Installed, awaiting electrical
1 Gregnile Brive	El Booti		connection.
Playstool Road	EPBP013	O/S 24	Column Installed, awaiting electrical connection.
Queenborough Road	EQAI102, EQAI117	VARIOUS LOCATIONS	Columns Installed, Electrical Connections programmed 21.08.14
Riddles Road	ERAX003, ERAX006, ERAX007	VARIOUS LOCATIONS	Columns Installed, awaiting electrical connection.
St Catherines Drive	ESDX005, ESDX008	VARIOUS LOCATIONS	Columns Installed, awaiting electrical connection.
St James Close	ESJD001, ESJD007, ESJD301	VARIOUS LOCATIONS	Columns Installed, awaiting electrical connection.
Sunny Bank	ESGE007	OPPS 25 / SIDE OF HONEYSUCKLE COURT	Column Installed, awaiting electrical connection.
The Glen	ETAT004, ETAT010, ETAT012	VARIOUS LOCATIONS	Columns Installed, awaiting electrical connection.
Thistle Walk	ETBQ302, ETBQ305	VARIOUS LOCATIONS	Columns Installed, awaiting electrical connection.
Thomas Road	ETBR501, ETBR502, ETBR504	VARIOUS LOCATIONS	Sign Posts Installed, awaiting electrical connections.
Tunstall Road	ETCM005, ETCM013, ETCM014	VARIOUS LOCATIONS	Columns Installed, awaiting electrical connection.
Water Lane	EWAP501	J/W OSPRINGE STREET	Sign Post Installed, awaiting electrical connections.
Wickham Close	EWFK302, EWFK352	VARIOUS LOCATIONS	Columns Installed, awaiting electrical connection.
Windermere	EWCS004	S/O 42	Column Installed, awaiting electrical connection.
Albany Road	EAAM502	OUTSIDE 2A	Awaiting Programme Date, expected completion end of October 2014.
Attlee Way	EABR010	OPPS S/O 2 PHILLIPA COURT	Awaiting Programme Date, expected completion end of

			October 2014.
Broadway	EBEO507	O/S YOUTH CLUB	Awaiting Programme Date, expected completion end of October 2014.
Canterbury Road	ECFY012, ECFY020, ECFY030, ECFY037	VARIOUS LOCATIONS	Awaiting Programme Date, expected completion end of October 2014.
Castle Road	ECGK005	O/S 214	Awaiting Programme Date, expected completion end of October 2014.
Commonwealth Close	ECDT504	J/W RECTORY ROAD 4 <sup>TH</sup> FROM A2	Awaiting Programme Date, expected completion end of October 2014.
Coronation Road	ECED502	O/S 44	Awaiting Programme Date, expected completion end of October 2014.
Dover Street	EDBM008	J/W WEST STREET	Awaiting Programme Date, expected completion end of October 2014.
East Street	EEAF001	J/W CRESCENT ROAD	Awaiting Programme Date, expected completion end of October 2014.
East Street	EEBK101	O/S 108	Awaiting Programme Date, expected completion end of October 2014.
Eurolink Way	EEBG006, EEBG009	VARIOUS LOCATIONS	Awaiting Programme Date, expected completion end of October 2014.
Fallowfield	EFCQ002	O/S 7	Awaiting Programme Date, expected completion end of October 2014.
Forbes Road	EFCI506	OPPS 29 / 30	Awaiting Programme Date, expected completion end of October 2014.
Fox Hill	EFCJ001	ADJ SCHOOL LANE OPP THE FOX & GOOSE PUBLIC HOUSE	Awaiting Programme Date, expected completion end of October 2014.
Frederick Street	EFBV003	O/S 29 / 31	Awaiting Programme Date, expected

	Τ		
			completion end of October 2014.
Grovehurst Road	EGCA107	S/O 4 BLUE HOUSES	Awaiting Programme Date, expected completion end of October 2014.
Grovehurst Road	EGCO004	J/W ATTLEE WAY KEMSLEY SIDE	Awaiting Programme Date, expected completion end of October 2014.
Hamilton Crescent	EHAF001	O/S 2	Awaiting Programme Date, expected completion end of October 2014.
Hilltop Road	EHCD501	S/O 71 BARTON HILL DRIVE	Awaiting Programme Date, expected completion end of October 2014.
Horsford Walk	EHEH003	S/O 25	Awaiting Programme Date, expected completion end of October 2014.
Key Street	EKBG006	O/S 56 / 58	Awaiting Programme Date, expected completion end of October 2014.
Key Street Roundabout	EUBH567, EUBH701	VARIOUS LOCATIONS	Awaiting Programme Date, expected completion end of October 2014.
Keycol Hill	EKBC011	O/S SQUIRELL COTTAGE	Awaiting Programme Date, expected completion end of October 2014.
Langley Road	ELAE503	OPPS 97	Awaiting Programme Date, expected completion end of October 2014.
London Road	ELBG019, ELBG021, ELBG024, ELBG032, ELBG042, ELBG043, ELBG045, ELBG046	VARIOUS LOCATIONS	Awaiting Programme Date, expected completion end of October 2014.
London Road	ELCN006, ELCN008, ELCN010, ELCN015, ELCN016, ELCN021, ELCN023,	VARIOUS LOCATIONS	Awaiting Programme Date, expected completion end of October 2014.

	El Olicos	1	T
	ELCN026, ELCN033		
London Road	ELDI010, ELDI013, ELDI014, ELDI017, ELDI021, ELDI025, ELDI026, ELDI028, ELDI030	VARIOUS LOCATIONS	Awaiting Programme Date, expected completion end of October 2014.
Love Lane	ELBS503	J/W GRAVENEY ROAD	Awaiting Programme Date, expected completion end of October 2014.
Minster Road	EMCO035	O/S 237 / 239	Awaiting Programme Date, expected completion end of October 2014.
Preston Park	EPDP005, EPDP007, EPDP302	VARIOUS LOCATIONS	All completed apart from EPDP302 which is currently awaiting electrical connections.
Preston Street	EPCI501, EPCI502, EPCI701, EPCI702, EPCI703	VARIOUS LOCATIONS	Awaiting Programme Date, expected completion end of October 2014.
Queens Road	EQAE005	OPPS 31	Awaiting Programme Date, expected completion end of October 2014.
Richmond Drive	ERCO002	O/S 7 LEFT HAND SIDE	Awaiting Programme Date, expected completion end of October 2014.
Rose Street	ERBQ506	OPPS 70 J/W PEPYS AVENUE	Awaiting Programme Date, expected completion end of October 2014.
Royal Road	ERBW701	OPPS J/W DELAMARK ROAD	Awaiting Programme Date, expected completion end of October 2014.
Shortlands Road	ESCL001, ESCL002, ESCL503, ESCL505, ESCL510, ESCL511	VARIOUS LOCATIONS	All completed apart from ESCL001 & ESCL002 which are currently awaiting electrical connections.
St Michaels Road	ESGW016, ESGW501, ESGW701	VARIOUS LOCATIONS	Awaiting Programme Date, expected completion end of

			October 2014.
Stanhope Avenue	ESEW005	O/S 14	Awaiting Programme Date, expected completion end of October 2014.
Staple Street	ESHS503, ESHS504	VARIOUS LOCATIONS	Awaiting Programme Date, expected completion end of October 2014.
Thanet Way	EUBS505	OPPS EXIT FROM SERVICES IN HIGHSTREET ROAD	Awaiting Programme Date, expected completion end of October 2014.
The Promenade	ETAX002	2 <sup>ND</sup> FROM LEYSDOWN ROAD	Specialist materials required for this, awaiting delivery date before programming.
Trinity Road	ETCS506	J/W STRODE CRESCENT	Awaiting Programme Date, expected completion end of October 2014.
Walsby Drive	EWFF357	O/S 11 2 <sup>ND</sup> SPUR	Awaiting Programme Date, expected completion end of October 2014.
Waterham Road	EWAR510	ON ISLAND J/W THANET WAY LONDON BOUND	Awaiting Programme Date, expected completion end of October 2014.
Whitstable Road	EWCH001	OPPS 1	Awaiting Programme Date, expected completion end of October 2014.
William Street	EWCP503, EWCP504, EWCP505, EWCP701, EWCP702	VARIOUS LOCATIONS	Awaiting Programme Date, expected completion end of October 2014.

# Appendix D - Traffic Systems

There is a programme of scheduled maintenance to refurbish life expired traffic signal equipment across the county based upon age and fault history. The delivery of these schemes is dependent upon school terms and holiday periods; local residents, businesses and schools will be informed verbally and by a letter drop of the exact dates when known.

Traffic Systems - Contact Officer: Toby Butler			
Location	Description of Works	Current Status	
A2 London Road near Sandford Road	Refurbishment of traffic signal controlled crossing	To be completed during September / October 2014	

# Appendix E – Developer Funded Works

Developer Funded Works (Section 278 Works)			
Road Name	Parish	Description of Works	Current Status
Wards Hill Road (Love Lane/Highview Rd) Sheppey	Minster	New Footway/ Pedestrian Crossing, Development Access	Works Underway
School Lane Iwade	Iwade	Provision of New Junction /Access for Housing Development	Certificate 1 issued now in maintenance period
School Lane Lower Halstow	Lower Halstow	Provision of New Junction /Access for Housing Development	Footway/Sign remedial works to be carried out
Mill Way, Sittingbourne	Sittingbourne	New traffic signals associated with new supermarket	Works complete
Oare Road Faversham	Oare	Traffic Signalised Junction to New Housing Development	Works Complete Signals Commissioned
Ruins Barn Road Tunstall	Tunstall	Extension of 30MPH Zone Junction and Street Lighting Improvements	Works Complete
Gas Road Off Mill Way Sittingbourne	Milton	Upgrading junction / Access to Milton Pipes Ltd	Awaiting Full Design Submission
Barton Hill Drive/Lower Road & Barton Hill Drive/Plover Road Minster Sheppey	Minster	TRO to ban right turn	Works to be carried out by KCC
Swale Way Adjacent A249 Junction Iwade/Kemsley	Iwade/Kemsley	Junction improvement for new Transport Yard	Works Underway

Minster Road and Marine Parade Sheerness / Minster		New Junction Access to Sheppey Academy (East	Works
Sheppey	Sheerness / Minster	&West Sites)	Underway
Leysdown Road Leysdown Sheppey	Leysdown	Upgrading School Junction / Access	Works Complete
Sondes Arms Selling Road Selling	Selling	Provision of New Access /Junction for Housing Development	Works complete
Asda Store Mill Way Sittingbourne	Sittingbourne	Provision of Signalised Junction to Store/Petrol Filling station	As Built Drawings being prepared
Dover St/West St Sittingbourne	Sittingbourne	Provision of revised access and frontage footway to Lidl Store	Works design submission being technically vetted

# Appendix F – Transportation, PROW and safety schemes

# **Appendix F1 – Local Transport Plan Funded (Named Schemes)**

The Traffic Schemes Team is implementing a number of schemes within the Swale District, in order to meet Kent County Council's strategic targets (for example, addressing traffic congestion, or improving road safety). Casualty Reduction Measures (CRMs) have been identified to address a known history of personal injury crashes; for Members' information, these are specifically highlighted with an asterisk:

Local Transport Plan Funded Schemes - Contact Officer Steve Darling						
Road Name	Parish	Description of Works	Current Status			
A2 / A251 junction	Faversham	Junction improvement, to ease congestion	At the June 2014 meeting, the JTB resolved to recommend proceeding with the roundabout option			
Swale QBP - public transport infrastructure	District wide	New bus poles, flags, clearways, raised kerb boarders	Route no. 3 - Design in progress			
B2008 Minster Rd (Isle of Sheppey Academy)*	Minster-on- Sea Puffin crossing and flashing warning signs		Works complete March 2014			
B2006 Eurolink Way / Castle Road*  Sittingbourne		Junction realignment and road reconstruction	Some minor lining works are outstanding. No further works are planned at present			

High Street / Central Avenue*	Sittingbourne	Pedestrian safety scheme	Scheme on hold, pending the outcome of SBC's consultation on extending restricted access to Fridays
Faversham lorry route signing	Faversham	Improved directions to HGV destinations	Works complete March 2014
Highsted Road	Sittingbourne	New footway (Farm Crescent to Swanstree Avenue)	Topographic survey and outline design complete. Legal Services commissioned to examine land issues
A2 / Murston Road	Sittingbourne	HGV signing scheme	Works substantially complete – interactive sign programmed August 2014
A2 London Road / Chalkwell Road*	Sittingbourne	Junction improvement	Design in progress
A2 Canterbury Road / Swanstree Avenue*	Sittingbourne	Traffic signal modifications	Design in progress
A2 St Michaels Road / Crown Quay Lane*	Sittingbourne	Junction improvement	Design in progress
B2005 Swale Way / Lloyd Drive*	Sittingbourne	Junction improvement	Design in progress
Eastchurch Primary School	Leysdown- on-Sea	School safety zone	Outline design complete – consultation taking place in August 2014

# Appendix G – Public Rights Of Way

Public Rights of Way – Contact Officer Melvyn Twycross					
Path No	Parish	Description of Works	Current Status		
No schemes					

# Appendix H - Bridge Works

Bridge Works – Contact Officer Tony Ambrose			
Road Name	Parish	Description of Works	Current Status
Rushenden Road	Queenborough	Retaining Wall and Culvert Repairs over The Creek	Works planned Autumn/Winter 2014
Bridge Road	Faversham	Carriageway Repairs to Brent Swing Bridge, Faversham	Completed

# Appendix I - Member Highway Fund programme update for the Swale District.

The following schemes are those which have been approved for funding by both the relevant Member and by John Burr, Director of Highways. It lists schemes that are; at consultation stage, due to be programmed or recently built onsite and is up to date as of 04 August 2014.

The details below are for Highway Schemes only and does not detail contributions Members have made to other groups such as Parish Councils.

More detail on their schemes, including schemes not listed below that are currently under investigation, can be accessed by each Member via the online database or by contacting their Member Highway Fund Officer.

### Lee Burgess - Swale Central

Scheme	Cost	Status
Cranbrook Drive, Sittingbourne. Construction of a new retaining Wall to be located at the Cranbrook Drive/Park Drive junction to prevent detritus from the soil bank from falling onto the footway and carriageway (and into the drainage system)	£9845	Design & Costing
Sittingbourne High Street Improvements (shared scheme). Improved gateway and 20 mph repeater signing (using hooped traffic sign system) and provision of an information point.	£35,000	Design & Costing

# Mike Baldock - Swale West

Scheme	Cost	Status
Westfield Gardens and Oak Close,	£1439	Works complete
Danaway – Double Yellow Lines		-
Sittingbourne High Street Improvements	£35,000	Design & Costing
(shared scheme). Improved gateway and		
20 mph repeater signing (using hooped		
traffic sign system) and provision of an		
information point.		

Sittingbourne DYL Junction Protection	£650	Design and TRO
(various) (shared scheme)		

# Roger Truelove – Swale Central

Scheme	Cost	Status
Brewery Road, Milton – Double Yellow	£1459 Works programmed	
Lines		
Sittingbourne DYL Junction Protection	£650	Design and TRO
(various) (shared scheme)		
Sittingbourne High Street Improvements	£35,000	Design & Costing
(shared scheme). Improved gateway and		
20 mph repeater signing (using hooped		
traffic sign system) and provision of an		
information point.		
Manor Grove – provision of verge		Works complete
protection		
Milton Regis School – Relocation of		Works complete
access (feasibility study and outline		
design)		
Iwade 20 mph – Investigation (feasibility		Works complete
study and outline design)		
Salt bin (fixed price) Windmill Road	£305.64	Handed over for delivery
St Peters RC Primary School,	£6238	Works partially complete.
Sittingbourne - DYLs & kerb build out		Works programmed (for
		DYLs)

# Angela Harrison - Sheerness

Scheme	Cost	Status
Sheerness various - Double Yellow Lines	£2247	Works complete
St Georges Avenue junction with	£9608	Works complete
Granville Road – removal of mini		-
roundabout		
Rushenden Road, Rushenden – Bus	£3500	Handed over for delivery,
Shelter		(currently with Swale
		Borough Council for
		construction)

# **Andrew Bowles – Swale East**

Scheme	Cost	Status
London Road junction with Claxfield Lane	£494	Works complete
<ul> <li>additional HGV sign</li> </ul>		

# 1.1 Legal Implications

1.1.1 Not applicable.

# 1.2 Financial and Value for Money Considerations

1.2.1 Not applicable.

# 1.3 Risk Assessment

1.3.1 Not applicable.

Contact: Toby Howe / Alan Blackburn 03000 418181



# Agenda Item 11

From: Michael Hill, Cabinet Member, Community Services

To: Environment & Transport Cabinet Committee – 22 July 2014

Decision No: N/A

Subject: Christmas / New Year 2013-14 Storms & Floods – Final Report

Classification: Unrestricted

Past Pathway of Paper: Cabinet - 7<sup>th</sup> July 2014

**Growth, Economic Development & Communities Cabinet** 

Committee – 8<sup>th</sup> July 2014

Future Pathway of Paper:

Electoral Division: N/A

**Summary**: This report provides the Cabinet Committee with a full review of lessons learned from the Christmas / New Year 2013-14 storms & flooding (and previous severe weather events) and makes recommendations for how the County Council, in collaboration with its partners, can be better prepared to manage such future events and flood risk.

**Recommendations**: The Cabinet Committee is asked to a) note and endorse the recommendations outlined in the Action Plan in **Annex 1**; and b) once approved, receive further options papers / progress reports on delivery against the Action Plan.

### 1. Introduction

- 1.1 Members will be aware that the extreme severe weather experienced over Christmas and New Year was unprecedented and presented an exceptionally challenging time for all concerned.
- 1.2 Indeed, in the Government's 'Flood Support Schemes Guide' sent to Local Authority Chief Executives in flood affected areas by Sir Bob Kerslake, Permanent Secretary, Department for Communities & Local Government (DCLG) and Head of the Civil Service stated:
  - 'On 5th and 6th December 2013, the worst tidal surges in 60 years struck the east coast of England, leaving a trail of destruction and flooded properties. In addition to the December tidal surges, the country has experienced the wettest winter in over 250 years. This has resulted in many areas of the country remaining on high alert for extended periods as the emergency services, supported by local authorities, statutory agencies and local residents have battled to protect communities'.
- 1.3 Notwithstanding that the initial severe storms and rainfall occurred during the Christmas Bank Holiday with many staff on leave and out of county, KCC deployed all its available staff throughout this period to support those communities across the County that were affected, not only by flooding, but by storm damage and power outages.
- 1.4 Kent was one of the most severely affected areas in the country with some 28,500 properties without power on Christmas Eve and 929 homes and business flooded over the following 8 week period. See **supporting Appendix 1 sections A1 and A2** for a detailed breakdown of properties flooded and other key facts and statistics.
- 1.5 It is recognised that these unprecedented severe weather events strained not only KCC resources but all other emergency and public services and priority decisions had to be made in order to ensure support to those communities, residents and businesses affected by these events.

# 1.6 This report provides:

- A summary of the storms & floods that affected Kent between December 2013 and February 2014 & the actions taken by KCC & its multi-agency partners in response;
- Good practice and lessons learned to inform how KCC and its partners can better respond to such emergencies in the future;
- A review of options for managing flood risk in the long-term; and
- Draft Action Plan for taking forward proposed recommendations see **Annex 1**.
- 1.7 Whilst this report will focus on the events from 23<sup>rd</sup> December 2013 onwards, to provide further background and context, reference is also made to the preceding severe weather events on 28<sup>th</sup> October (St Jude storm) and 5<sup>th</sup> & 6<sup>th</sup> December (east coast tidal surge).
- 1.8 Contributions from the following have been used to inform the content of this report:
  - Internal KCC and multi-agency debriefs;
  - Key internal departments & partner agencies e.g. KCC Flood Risk Management, Environment Agency (EA) and Kent Police;
  - Individual responses from residents, businesses and elected representatives; and
  - Public consultation meetings and 'flood fairs' in affected communities<sup>1</sup>.
- 1.9 Details of key meetings & event dates are provided in **Appendix 1 section A3**.

# 2. Managing Emergencies

- 2.1 The Civil Contingencies Act 2004 establishes a clear set of roles & responsibilities for those involved in emergency preparedness & response at the local level. The Act divides local responders into 2 categories, imposing a different set of duties on each.
- 2.2 'Category 1 Responders' are organisations at the core of the response to most emergencies (e.g. the emergency services, local authorities, NHS bodies and the EA) and have statutory responsibilities for the ensuring plans are in place to deal with a range of emergency situations, including flooding. 'Category 2 Responders' (e.g. the Health & Safety Executive, transport and utility companies) are 'co-operating bodies'. They are less likely to be involved in the heart of planning work, but are heavily involved in incidents that affect their own sector. Category 2 Responders have a lesser set of duties - co-operating and sharing relevant information with other Category 1 & 2 Responders.
- 2.3 Category 1 & 2 Responders come together to form 'Local Resilience Forums' (based on police force areas) which helps co-ordination and co-operation between responders at the local level. In Kent, this is known as the Kent Resilience Forum (KRF), which is chaired by Kent Police who adopt the lead organisation role in most emergency situations.

### 3. Management of the Emergency

3.1 Kent Police undertook the role of lead organisation in the 'emergency response' phases, with each declared emergency given an operational name - see Appendix 1 section A4 for details.

3.2 During the 'emergency response' phases, a multi-agency 'Gold' Strategic Co-ordinating Group (SCG) and 'Silver' Tactical Co-ordinating Group (TCG) were hosted and chaired by Kent Police at Kent Police Headquarters and Medway Police Station respectively.

2

<sup>&</sup>lt;sup>1</sup> Public meetings with residents / businesses were co-ordinated by the EA via the Parish / Town Councils & the Tonbridge Forum, with attendance from elected members and officers from KCC, District / Borough Councils, Kent Police and Southern Water. Flood fairs are a joint initiative between District / Borough Councils, EA, KCC, Parish / Town Councils & the National Flood Forum - a charity that raises awareness of flood risk & helps communities to protect themselves & recover from flooding.

Page 38

- 3.3 Multi-agency 'Bronze' Operational teams were deployed across the County in specific affected communities (e.g. Yalding, Bridge and the Brishing Dam) and undertook work such as door-knocking, evacuations, sandbagging and public reassurance.
- 3.4 Led by the Kent Police Gold Commander, the SCG agreed upon a Gold Strategy to guide the response, with the central aim of:

'Saving and protecting life and property risks to people in Kent and Medway by coordinating multi-agency activity to maintain the safety and security of the public'.

- 3.5 The core roles undertaken by KCC were as follows:
  - Supporting and, at times, leading multi-agency co-ordination;
  - Responding to the effects on the highway network throughout the period dealing with fallen trees, damaged roads, surface water flooding, blocked gullies and more;
  - On-scene liaison with partners and affected communities;
  - Working with District / Borough Councils to provide temporary accommodation to those who were flooded, with transport arranged to take people from flooded areas to safety;
  - Provision of welfare support to those evacuated or in their own homes<sup>2</sup>;
  - Co-ordinating support from the voluntary sector<sup>3</sup>; and
  - Logistics management of countywide resources such as sandbags.

# 4. Recovery Management

4.1 As of 18th February, KCC has been the lead organisation in managing the long-term recovery process and has developed a Gold Recovery Strategy with the central aim of:

'Ensuring partnership working to support the affected individuals, communities and organisations to recover from the floods and return to a state of normality'.

- 4.2 To manage the recovery, five task-focused teams have been established with representatives from all appropriate authorities and organisations involved
  - Health, Welfare & Communities: KCC Public Health led;
  - Environment & Infrastructure: EA led:
  - Business & Economy: KCC Business Engagement & Economic Development led;
  - Finance, Insurance & Legal: KCC Finance led; and
  - Media & Communications: KCC Communications led.
- 4.3 Central Government are taking a keen interest in progress and key issues, with regular reporting to DCLG and the office of Greg Clark MP, the Flood Recovery Minister for Kent.

#### 5. Lessons Learned

5.1 The following are the main points raised during the relevant debriefs, meetings & individual responses received, which have been used to inform a set of recommendations which are summarised in the Draft Action Plan in Annex 1.

5.2 For reference, the draft lessons learned from the KRF multi-agency debrief held on 21st March 2014 can be found at **Appendix 1 section A5**.

3

<sup>&</sup>lt;sup>2</sup> This included vulnerable person checks and provision of food, clothing and other practical support, such as arranging electrical contractors to ensure safety within people's flooded homes and hiring dehumidifiers to support the clear up.

<sup>&</sup>lt;sup>3</sup> This included undertaking community liaison roles and provision of equipment, practical support (such as first aid, This included undertaking community maison roles and psycho-social support transportation, or provisions for responders) and psycho-social support.

# Pre-Planning & Resilience

#### Identified Successes

- 5.3 Overall, KCC and it's KRF partners, with joint planning for responding to and management of emergencies, were able to deliver support and assistance to the many communities, individuals and businesses in Kent affected by the severe weather events.
- 5.4 Staff, systems & procedures coped well when one considers the unprecedented scale, complexity and protracted nature of the events that took place
- 5.5 There were numerous examples of the commitment & resourcefulness of staff, partners, volunteers and communities to help others in need and to provide practical solutions to real problems for those affected.

# Areas for Improvement

- 5.6 In the early stages of the response, staffing levels were affected by the timing of the emergencies, which occurred over the Christmas Bank Holiday period. Coupled with the sustained and complex nature of the emergency, on occasions considerable demands were placed upon a small number of individuals & teams undertaking crucial emergency response roles. Increased resilience should be established across KCC to be better prepared in the future.
- 5.7 Although there is no legal obligation on any organisation to provide sandbags and other practical support (e.g. pumps, dehumidifiers), public expectation was, understandably, to the contrary. This was exacerbated throughout the response by a general lack of awareness, mis-communications & inconsistency of approaches adopted.
- 5.8 Linked to this last point, it has been observed and reported of a general lack of flood awareness and individual / community resilience. For example, in some parts of Kent, 40-50% of the homes and businesses at risk of flooding in Kent are not signed-up to the EA's Floodline Warnings Direct (FWD) Service and so are unlikely to receive any prior warning of flooding see **Appendix 1 section A6** for more details.

#### Recommendations

<u>REC1:</u> Undertake a fundamental review & update of key KCC and partnership plans to ensure they are fit-for-purpose for even the most complex and protracted of incidents.

<u>REC2:</u> Provide Cabinet with an options paper for enhancing KCC's resilience, including training a cadre of 'emergency reservists'. Once approved, implement a programme to train, equip & support relevant personnel in readiness for Winter 2014.

<u>REC3:</u> Develop a consistent countywide policy & plans for maintaining & providing sandbags and other practical support to individuals & communities at risk of flooding.

<u>REC4:</u> Implement a strategy to encourage greater flood awareness & individual / community resilience, including improving sign-up for the EA's Floodline Warnings Direct (FWD) Service and training local volunteers as Flood Wardens.

# Command, Control, Co-ordination & Communications

#### Identified Successes

5.9 Actions by KCC and our partners undoubtedly saved and protected life, livestock and properties.

- 5.10 As the emergency progressed, joint plans, procedures and working arrangements matured, informed by the experiences of previous events.
- 5.11 When established, multi-agency co-ordination was effective, particularly when this was co-located. Specifically, Bronze / Operational teams deployed on the ground provided an effective and invaluable link into affected communities, particularly when communication and transport links were disrupted
- 5.12 Throughout the sequence of events, the voluntary sector provided extremely valuable support, demonstrating a high level of professionalism, dedication and capability.

# Areas for Improvement

- 5.13 Feedback from debriefs, public consultations & flood fairs suggest that the EA's flood warnings were not always received or there was difficulty in receiving warnings, particularly as power supplies were disrupted. Additionally, many residents received conflicting warnings, were unsure of the level of risk & therefore the relevant actions they should take.
- 5.14 KCC and its partners responded to emergency calls throughout Christmas Eve, Christmas Day & Boxing Day. However, pressure on staffing levels due to the Bank Holiday & sheer volume / complexity of incidents that were being reported led to delays in establishing coordinated multi-agency support structures in key affected communities (e.g. Tonbridge, Hildenborough, East Peckham, Yalding & Maidstone) until the following weekend which, understandably, has angered many residents & businesses.
- 5.15 Additionally, partner agencies, residents & businesses alike all suffered from a lack of / poor quality engagement & support from the utilities companies, particularly the power, water & sewerage providers.
- 5.16 Information management was a continual challenge difficulties in obtaining critical information when it was need and, vice versa, information overload at times of intense pressure.

#### Recommendations

<u>REC5:</u> Undertake a fundamental review & update of the EA's Floodline Warnings Direct (FWD) Service for communities with high / complex flood risk.

<u>REC6:</u> Develop enhanced arrangements for warning & informing the public in flooding / severe weather scenarios, including contingency arrangements in the event of power outages and greater usage of social media.

<u>REC7:</u> Develop multi-agency arrangements to provide critical 'on scene' liaison & support to affected communities e.g. via multi-agency 'Bronze' / Operational teams.

<u>REC8:</u> Work with DCLG and the Flood Recovery Minister for Kent to bring pressure to bear on utilities companies to improve their arrangements for engaging with & supporting partners & customers.

<u>REC9:</u> Streamline & enhance existing multi-agency information management protocols & systems for sharing critical data in the planning for & management of emergencies.

### Escalation, De-Escalation & Recovery

# Identified Successes

5.17 Central Government colleagues have commended KCC and our partners for our approach in a number of key areas, and are promoting these as good practice e.g. early identification & monitoring of warnings / developing situations and a flexible / proportionate approach; and recovery management arrangements developed during Operation Sunrise 4.

Page 41

# Areas for Improvement

- 5.18 Some partners felt that, at times, there were delays in 'standing up' the co-located multiagency emergency response co-ordination arrangements and, conversely, that these were occasionally stood-down too soon, declaring the 'emergency' over and handing-over to the 'recovery' phase.
- 5.19 Delays in involvement / support from Central Government caused difficulties for partners and the public over Christmas / New Year period. Conversely, once Central Government command & control was put in place, requests for detailed information at very short notice placed an additional burden on local responders.
- 5.20 The financial support schemes brought in by Central Government have also been difficult to interpret and implement at the local level, and do not adequately reflect the significant burdens placed on County Councils e.g. most schemes are focussed towards the Districts / Borough Councils, with significant cost incurred by KCC currently unlikely to qualify for central support.

### Recommendations

<u>REC10:</u> Formalise the recovery management structures developed during Operation Sunrise 4 and adopt these as good practice.

<u>REC11:</u> Develop protocols to support emergency responders in deciding when to escalate / deescalate to / from the 'emergency response' & 'recovery' phases.

<u>REC12:</u> Influence Central Government to secure additional financial support in recognition of the severe burden that these incidents have placed on KCC.

# 6. Flood Risk Management

6.1 As well as lessons learned to improve how KCC prepares for and manages flooding emergencies in the future, consideration must also be given to roles of each organisation and the broader flood risk management options available for preventing or reducing the likelihood and / or impacts of flooding occurring.

### Roles & Responsibilities

- 6.2 <u>EA</u>: Responsible for taking a strategic overview of the management of all sources of flooding and coastal erosion. This includes, for example, setting the direction for managing the risks through strategic plans; working collaboratively to support the development of risk management and providing a framework to support local delivery including the administration of Flood Defence Grant in Aid (FDGiA). The Agency also has operational responsibility for managing the risk of flooding from main rivers, reservoirs, estuaries and the sea, as well as being a coastal erosion risk management authority.
- 6.3 KCC: Lead Local Flood Authority (LLFA) for Kent as defined by the Flood and Water Management Act (2010) and has a role to provide strategic overview of local flooding, which is defined as flooding from surface water, groundwater and ordinary watercourses (watercourses that are not main rivers). As part of its role as LLFA KCC has prepared and adopted the Kent Local Flood Risk Management Strategy, which sets out the objectives for managing local flood risks in Kent. All risk management authorities must act consistently with the local strategy.

Highway Authority for Kent - has a role to maintain safe conditions on the roads by taking appropriate actions that may include the provision of temporary flood warning signs, clearance of flood water, reactive cleansing of the highway drainage system and the organisation of road closures and traffic diversions when roads become flooded.

- 6.4 <u>District / Borough Councils</u>: Key partners in planning local flood risk management and can carry out flood risk management works on minor watercourses, working with LLFA and others, including through taking decisions on development in their area which ensure that risks are effectively managed. Districts / Boroughs and Unitary Authorities in coastal areas also act as coastal erosion risk management authorities.
- 6.5 <u>Internal Drainage Boards</u>: Independent public bodies responsible for water level management in low lying areas, also play an important role in the areas they cover (approximately 10% of England at present), working in partnership with other authorities to actively manage and reduce the risk of flooding.
- 6.6 <u>Water and Sewerage Companies:</u> Responsible for managing the risks of flooding from water and foul or combined sewer systems, providing drainage from buildings and yards.

# Effectiveness of River & Flood Management Assets

- 6.7 Partners, residents & businesses alike have raised a number of queries & concerns regarding the effectiveness of river & flood management systems / assets operated by the EA and Southern Water, including:
  - <u>EA:</u> dredging of rivers and the operation of the Leigh Barrier and sluice gates at Yalding & Allington; and
  - <u>Southern Water:</u> lack / effectiveness of non-return valves in preventing sewage flooding, particularly in the Tonbridge area.

#### Recommendations

<u>REC13:</u> EA / Southern Water to respond to queries / concerns regarding the perceived lack / effectiveness of their management of rivers & flood management systems / assets.

### Potential Flood Defence Schemes – information supplied by the EA

- Approximately 65,000 homes and businesses are at risk of fluvial or coastal flooding in Kent, of which 38,000 currently benefit from flood defences with 27,000 not benefitting from defences. The EA has identified a further £194m of investment which would protect an additional 17,000 properties, between now and 2021. It has also identified further schemes identified for 2021 and beyond through its pipeline development programme.
- 6.9 The EA has worked successfully in the past with KCC and the private sector to implement flood risk management schemes such as the Sandwich Town Tidal Defence Scheme. It has also attracted additional partnership funding from a range of contributors including private businesses, developers and other government departments. There is a need to continue to work together to secure funding for priority schemes.
- 6.10 The recent flooding across the County has reinforced the need to accelerate this investment to reduce the risk of flooding. The EA in Kent & South London has secured £27.4m FDGiA for 2014-15. This will allow the EA to progress schemes including:
  - Broomhill Sands Sea Defences
  - Sandwich Town Tidal Defences
  - Leigh Barrier Mechanical / Electrical Improvements
  - Study into Yalding Storage on the Beult
- East Peckham (Medway) Flood Alleviation Scheme (FAS)
- Aylesford Property-Level Protection Scheme (£50k contribution from KCC)
- Repairing assets damaged in the recent coastal surge and fluvial floods

Denge shingle re-nourishment

# Flood Defence Grant in Aid (FDGiA)

- 6.11 In order to protect areas at Kent at risk of flooding investment is required in flood defences. The government will contribute to flood defences through FDGiA. However, current rules mean that schemes are rarely fully funded through this grant. Additional contributions or partnership funding is required to make up the shortfall. Without partnership funding flood defence schemes cannot be delivered.
- 6.12 The Government's partnership funding mechanism means that each scheme must have a minimum cost benefit of 8 1 and a partnership funding score of more than 100% in order to achieve Government allocated FDGiA. The EA has identified priority locations for accelerating flood defence projects based on people at risk and economic development including Yalding and Tonbridge that do not currently meet FDGiA criteria.
- 6.13 Areas that require investment to deliver flood defences in Kent include:
  - The Leigh Flood Storage Area (FSA) and Lower Beult;
  - East Peckham;
  - Five Oak Green;
  - South Ashford;

- Dover:
- Whitstable & Herne Bay:
- Folkestone; and
- Canterbury.
- 6.14 See **Appendix 1 section A7.4** for a detailed financial breakdown of each scheme.

#### Recommendations

<u>REC14:</u> Explore all possible opportunities with partners and beneficiaries to contribute to the priority flood defence schemes required in Kent, including influencing the EA, Defra & HM Treasury to secure funding to deliver the schemes that do not currently receive sufficient FDGiA funding even with substantial partnership contributions.

# 6.15 Highway Drainage Improvements

The County Council is responsible for the maintenance of 5,400 miles of public highway including 250,000 roadside drains and associated drainage systems. The weather this winter highlighted numerous pinch points in the drainage network. Some of these are being addressed by the implementation of an enhanced cleansing regime however in a large number of cases work is required to improve the functionality of the system.

In response, the County Council is investing an additional £3m to enable the delivery of 120 drainage improvement schemes in 2014/15. Renewals and improvements are being prioritised on the basis of the frequency of flooding and the risk posed to highway safety, properties adjacent to the highway and network disruption.

# Other Flood Risk Management Options

- 6.16 Work is also currently on-going in the county by the EA and KCC to improve our understanding of flood risk and investigate options to provide protection. These include:
  - Spatial & land-use planning & drainage;

- Personal flood resilience:
- · High / complex flood risk communities; and
- Surface water management.

In most of the above areas, existing strategies and programmes of work are maintained by the relevant authorities. However, in light of recent events and the issues / opportunities highlighted in **Appendix 1 section A8** the following recommendations are made.

#### Recommendations

<u>REC15:</u> Ensure the consequences of flood risk are fully considered before promoting development in flood risk areas by consulting all organisations with a role in flood risk management and emergency management.

<u>REC16:</u> Implement a strategy to encourage greater awareness & take-up of individual & community flood protection measures e.g. property-level protection, sandbags.

<u>REC17:</u> Support awareness & implementation of key initiatives to support communities with high / complex flood risk, particularly e.g. Surface Water Management Plans (SWMPs), Multi-Agency Flood Alleviation Technical Working Groups

#### 7. Recommendations

**Recommendations**: The Cabinet Committee is asked to a) note and endorse the recommendations outlined in the Action Plan in **Annex 1**; and b) once approved, receive further options papers / progress reports on delivery against the Action Plan.

# 8. Supporting Information

# 8.1 Annex 1. Draft Action Plan

### 8.2 Appendix 1 – Christmas & New Year 2013-14 Storms & Floods Final Report

#### Sections as follows:

- A1. Numbers of Properties Flooded;
- A2. Key Facts & Statistics;
- A3. Key Meeting & Event Dates
- A4. Summary of Emergency Response Operations;
- A5. Kent Resilience Forum (KRF) Multi-Agency Debrief Draft Lessons Learned;
- A6. Floodline Warnings Direct (FWD) Service;
- A7. Potential Future Flood Defence Schemes; and
- A8. Other Flood Risk Management Options.

### 8.3 Background Documents

Christmas / New Year Storms & Floods Update Report to KCC Cabinet (22<sup>nd</sup> January 2014)

https://democracy.kent.gov.uk/mgConvert2PDF.aspx?ID=44733 (Report & https://democracy.kent.gov.uk/mgConvert2PDF.aspx?ID=44762 Appendices)

Kent Local Flood Risk Management Strategy

http://www.kent.gov.uk/about-the-council/strategies-and-policies/environment-waste-and-planning-policies/flooding-and-drainage-policies/kent-flood-risk-management-plan

Local Surface Water Management Plans

http://www.kent.gov.uk/about-the-council/strategies-and-policies/environment-waste-and-planning-policies/flooding-and-drainage-policies/surface-water-management-plans

Revenue & Capital Budget Monitoring Report to KCC Cabinet (28<sup>th</sup> April 2014)

https://democracy.kent.gov.uk/mgConvert2PDF.aspx?ID=46275

Flood Support Schemes - Funding Available from Central Government

https://www.gov.uk/government/uploads/system/uploads/attachment\_data/file/304805/Flood\_Recovery - Summary of Support Guide.pdf

DfT Pothole Challenge Fund

https://www.gov.uk/government/news/councils-urged-to-apply-for-168-million-pothole-repair-fund

Severe Weather Impacts Monitoring System (SWIMS)

http://www.kent.gov.uk/business/Business-and-the-environment/severe-weather-impacts-monitoring-system-swims

#### 9. Contact Details

- Paul Crick, Director of Environment, Planning & Enforcement 01622 221527 / paul.crick@kent.gov.uk
- Stuart Beaumont, Head of Community Safety & Emergency Planning 01622 694878 / stuart.beaumont@kent.gov.uk
- Steven Terry, Kent Resilience Team (KRT) Manager 01622 692121 x 7811 / steve.terry@kent.gov.uk

# **Annex 1. Draft Action Plan**

No.	Recommendation	Lead / Supporting Action Owner(s)	Start Date	End Date
REC1	Undertake a <b>fundamental review &amp; update of key KCC and partnership plans</b> to ensure they are fit-for-purpose for even the most complex and protracted of incidents.	KCC / KRT	Jun 2014	Nov 2014
REC2	Provide Cabinet with an <b>options paper for enhancing KCC's resilience</b> , including training a cadre of 'emergency reservists'. Once approved, implement a programme to train, equip & support relevant personnel in readiness for Winter 2014.	ксс	Aug 2014	Nov 2014
REC3	Develop a consistent countywide policy & plans for maintaining & providing sandbags and other practical support to individuals & communities at risk of flooding.	KRT / Districts &	July 2014	Nov 2014
Page 4	Implement a strategy to encourage greater flood awareness & individual / community resilience, including improving sign-up for the EA's Floodline Warnings Direct (FWD) Service and training local volunteers as Flood Wardens.	Boroughs / EA	Apr 2014	Nov 2014
REC5	Undertake a fundamental review & update of the Floodline Warnings Direct (FWD) Service for communities with high / complex flood risk.			
REC6	Develop enhanced arrangements for warning & informing the public in flooding / severe weather scenarios, including contingency arrangements in the event of power outages and greater usage of social media.	EA / KRT	July 2014	Nov 2014
REC7	Develop multi-agency arrangements to provide critical 'on scene' liaison & support to affected communities e.g. via multi-agency 'Bronze' / Operational teams.	KRT	July 2014	Nov 2014
REC8	Work with DCLG and the Flood Recovery Minister for Kent to <b>bring pressure to bear on utilities companies</b> to improve their arrangements for engaging & supporting partners & customers.			oing
REC9	Streamline & enhance existing multi-agency information management protocols <b>&amp; systems</b> for sharing critical data in the planning for & management of	KRT	July 2014	Nov 2014

No.	Recommendation	Lead / Supporting Action Owner(s)	Start Date	End Date
	emergencies.			
REC10	Formalise the recovery management structures developed during Operation Sunrise 4 and adopt these as good practice.			
REC11	Develop protocols to support emergency responders in deciding when to escalate / de-escalate to / from the 'emergency response' & 'recovery' phases.	KRT	July 2014	Nov 2014
REC12	Influence Central Government to secure additional financial support in recognition of the severe burden that these incidents have placed on KCC.	ксс	Ong	oing
REC13	EA / Southern Water to respond to queries / concerns regarding the perceived lack of / effectiveness of their rivers & flood management systems / assets	EA / Southern Water	July 2014	Sept 2014
Page 48	Explore all possible opportunities with partners and beneficiaries to contribute to the priority flood defence schemes required in Kent, including influencing the EA, Defra & HM Treasury to secure funding to deliver the schemes that do not currently receive sufficient FDGiA funding even with substantial partnership contributions.	KCC & Districts & Ongoing		oing
REC15	Ensure the consequences of flood risk are fully considered before promoting development in flood risk areas by consulting all organisations with a role in flood risk management and emergency management.	d / KCC, EA & KRT		Mar 2015
REC16	Implement a strategy to encourage greater awareness & take-up of individual & community flood protection measures e.g. property-level protection, sandbags.	KRT / Districts / Boroughs / EA		
REC17	Support awareness & implementation of key initiatives to support communities with high / complex flood risk, particularly e.g. Surface Water Management Plans (SWMPs), Multi-Agency Flood Alleviation Technical Working Groups	· ·		oing

<sup>\*</sup> Action Owners listed here are illustrative and these lists are not exhaustive. Work will need to involve a broader range of organisations with flood risk management responsibilities.

# Christmas & New Year 2013-14 Storms & Floods Final Report Appendix 1

# **A1. Numbers of Properties Flooded**

A1.1 As of 15<sup>th</sup> May 2014, the following are the latest figures provided by the EA and Districts / Boroughs to the Department of Communities & Local Government (DCLG).

County	Residential	Commercial	Total
Surrey	1,971	342	2,313
Thames Valley	635	295	930
Kent	731	198	929
Lincolnshire	662	106	768
Wiltshire	484	56	540
Cornwall (incl. the Isles of Scilly)	267	144	411
North Lincolnshire	339	70	409
Dorset	252	81	333
Norfolk	215	69	284
Devon	121	85	206
West Sussex	112	18	130
East Sussex	81	16	97

# A1.2 Detailed breakdown of properties flooded in Kent.

Authority Area	Residential	Commercial	Total
Ashford	-	1	1
Canterbury	40	4	44
Dartford	10	3	13
Dover	30	6	36
Gravesham	2	-	2
Maidstone	207	55	262
Medway	3	2	5
Sevenoaks	30	6	36
Shepway	8	1	9
Swale	36	17	53
Thanet	-	-	0
Tonbridge & Malling	335	101	436
Tunbridge Wells	30	2	32
Total	731	198	929

<u>Important Note:</u> These figures presented are likely to be an underestimate as they mainly consist of properties known to have been flooded by rivers, groundwater or groundwater-fed rivers. Information on numbers of properties flooded by surface water or sewage is less certain. Additionally, many hundreds

more properties were indirectly affected by flooding (loss of utilities, access etc.) e.g. Tonbridge & Malling Borough Council (TMBC) estimate 720 businesses indirectly affected in their area.

# A2. Key Facts & Statistics

- A2.1 The following is a snapshot of key facts & statistics from Operation Vivaldi and Operations Sunrise 2, 3 & 4.
- A2.2 A comprehensive report into the key facts & statistics, costs & demands (collated using the Severe Weather Impact Monitoring System SWIMS) from all the severe weather events experienced over Winter 2013-14, will be tabled by KCC Sustainability & Climate Change Team later in the coming months.
  - **4.7m** peak sea levels in Dover on 5<sup>th</sup> & 6<sup>th</sup> December, the highest recorded since 1905. The Environment Agency (EA) estimates that the tidal impacts in Sandwich were equal to a 1 in 200 year event and the biggest tidal event to impact Kent since the devastating event of 1953.
  - **120mm** of rainfall falling between 19<sup>th</sup> to 25<sup>th</sup> December on already saturated ground on the Upper Medway catchment. December 2013 was the wettest December for 79 years.
  - **342m³** / **second** the highest ever peak flows upstream of Leigh Barrier Flood Storage Area (FSA) were recorded on Christmas Eve.
  - **91** x Flood Alerts, **73** x Flood Warnings and **5** x Severe Flood Warnings issued by the EA for Kent since December.
  - **28,500** properties without power in Kent on Christmas Eve.
  - **929** properties flooded in Kent since Christmas Eve. In the 2000 floods, approximately 1000 properties were flooded in Kent.
  - **50,000** sandbags provided by KCC, District / Borough Councils and the EA to help protect at risk communities.
  - **6,400** hours worked by KCC Emergency Planning staff since 20<sup>th</sup> December in response to the storms & floods, including 1,300 out-of-hours and sustained periods where the County Emergency Centre (CEC) was operating 24 hours a day.
  - **88** flood victims supported by Kent Support & Assistance Service (KSAS) with essential cash, goods and services.
  - **32,000** calls received by KCC Highways & Transportation in January, a 150% increase in normal call volumes.
  - 6km of public rights of way in need of repair.
  - £8.6m central government grant received by KCC under the 'Severe Weather Recovery Scheme' to help repair damaged highways infrastructure<sup>1</sup>.
  - £3m new investment by KCC Highways & Transportation into significant drainage schemes to improve existing infrastructure that was impacted by the floods.

Page 50

ii

<sup>&</sup>lt;sup>1</sup> KCC Finance is exploring the potential for additional central funding being progressed by KCC Finance, under the Bellwin Scheme and the 'Pothole Challenge Fund'.

# A3. Key Meeting & Event Dates

A3.1 The following is a summary of key debriefs, public consultation meetings and flood fairs, feedback from which has been used to inform this report.

Date	Details	Location
3 <sup>rd</sup> December 2013	Kent Resilience Forum (KRF) multi-agency debrief for Op. Sunrise 1	Kent Police HQ
4 <sup>th</sup> February 2014	Public consultation meeting	Hildenborough
4 Febluary 2014	Public consultation meeting	Faversham
5 <sup>th</sup> February 2014	Public consultation meeting	Danvers Road, Tonbridge
12 <sup>th</sup> February 2014	Public consultation meeting	East Peckham
17 <sup>th</sup> February 2014	Public consultation meeting	Tonbridge Forum
19 <sup>th</sup> March 2014	Public consultation meeting	Collier Street
21 <sup>st</sup> March 2014	KRF multi-agency debrief for Op. Vivaldi and Ops. Sunrise 2, 3 & 4	Kent Police HQ
28 <sup>th</sup> March 2014	KCC internal debrief for Op. Vivaldi and Ops. Sunrise 2, 3 & 4	KCC
5 <sup>th</sup> April 2014	Flood fair	East Peckham
12 <sup>th</sup> April 2014	Flood fair	Hildenborough
8 <sup>th</sup> , 13 <sup>th</sup> & 19 <sup>th</sup> April 2014	Flood fair	Yalding
26 <sup>th</sup> April 2014	Flood fair	Little Venice Caravan Park & Tovil
27 <sup>th</sup> April 2014	Flood fair	Maidstone
3 <sup>rd</sup> May 2014	Flood fair	Tovil & East Farleigh
4 <sup>th</sup> May 2014	Flood fair	Clifford Way, Maidstone
10 <sup>th</sup> May 2014	Flood fair	Yalding
11 <sup>th</sup> May 2014	Flood fair	Little Venice Caravan Park

# A4. Summary of Emergency Response Operations

#### A4.1 Important Notes

- The sequence of severe weather events, which necessitated complex & protracted multiagency emergency operations are summarised below.
- The date ranges and operational names outlined above refer specifically to the 'emergency phase' of these events, where the situation is deemed to present a risk to life. For several days and weeks preceding and superseding each event, a significant multi-agency effort in the pre-planning for, and recovery from, each incident was put in place throughout and beyond these periods.
- Indeed, to date the recovery operations are still ongoing for the Christmas / New Year events, some 4 months later.
- A range of additional complex and challenging events also occurred during this period, including:
  - Significant operations to prevent flooding from Brishing Dam at Boughton Monchelsea;
  - Widespread surface water flooding in Eynsford (17<sup>th</sup> to 19<sup>th</sup> January);
  - o A 'mini tornado' on 27<sup>th</sup> January; and
  - A number of sink-holes causing disruption, including a 15ft deep hole on the M2 central reservation (11<sup>th</sup> February).

# A4.2 'Operation Sunrise 1': 28th October 2013

• St Jude Storm – Winds speeds in excess of 90mph hit the County causing widespread disruption to travel & power supplies and, tragically, one fatality.

# A4.3 'Operation Vivaldi': 5<sup>th</sup> & 6<sup>th</sup> December 2013

Spring tides combined with a tidal surge caused flooding along the East and South UK coastline impacting much of Kent coastline. The EA issued 5 x Severe Flood Warnings, 3 x Flood Warnings & 6 x Flood Alerts to homes and businesses. 41,000 properties were protected by flood walls, banks and other flood risk management assets along the Kent coast and estuaries. 58 properties were flooded.

# A4.4 'Operation Sunrise 2': 23<sup>rd</sup> to 27<sup>th</sup> December 2013

 Storm force winds (60-70mph) leave 28,500 properties without power. Heavy rainfall on already saturated catchments causes river, surface water and sewage flooding across Kent, particularly in the north and west of the county. Numerous communities suffered flooding, with hundreds of homes and many businesses affected. Edenbridge, Tonbridge and Hildenborough, East Peckham, Yalding, Collier Street and surrounding communities, Maidstone, and South Darenth, amongst other locations, were all significantly affected.

# A4.5 'Operation Sunrise 3': 4th to 6th January 2014

 A sudden deterioration in weather conditions threatened to bring further flooding of severity akin to that experienced over Christmas to already affected communities, and elsewhere. A significant multi-agency operation was put in place (including Military assistance) to provide thousands of sandbags for communities at risk.

Page 52 iv

# A4.6 'Operation Sunrise 4': 6<sup>th</sup> to 18<sup>th</sup> February 2014

• Heavy rainfall continued into February 2014. As the rainfall soaked into the ground we experienced extremely high groundwater levels. In some locations groundwater flooding exceeded previously recorded levels by over 1 metre. The peak of the event was experienced towards the end of February and communities were subject to both groundwater flooding and flooding from groundwater fed rivers. The impacts of groundwater flooding in Kent were widespread with particular concentration along the Elham Valley. A multi-agency response to the groundwater flooding and pre-planned measures were deployed to reduce the damage to communities vulnerable to groundwater flooding, including over-pumping of sewage by Southern Water and a significant sand-bagging operation.

# A5. Kent Resilience Forum (KRF) Multi-Agency Debrief – Draft Lessons Learned

# A5.1 Important Note

- The following are initial <u>draft</u> lessons identified through the KRF multi-agency debrief process hosted by Kent Police on 21st March 2014.
- At time of writing these have yet to be agreed with partners, but Kent Police will shortly be circulating a draft debrief report to all partners for consultation.

# A5.2 Pre-Planning & Resilience

- Kent Resilience Team (KRT) to develop guidance for the public in a range of situations advising them of which agencies are responsible for which issues within their areas, and who will provide what information.
- Pan-Kent flood response plans to be reviewed to ensure they are cognisant of arrangements and contingencies across all levels, including Parish, District / Borough and County.
- Review of emergency plans to ensure use of social media for warning and informing purposes is included.
- A number of respondents cited the benefit of taking part in Training & Exercising programmes at National and Regional level which left us better placed than in previous flooding events.
- It was suggested that adoption a similar programme focussed at district level would have eased some of the more local issues and built working relationships. The KRT should work with local partners to deliver a number of District / Borough based exercises focussed on civil emergency type scenarios.
- KRF to maximise training & exercising opportunities for staff attending the multi-agency Tactical Co-ordination Centre (TCC) / Strategic Co-ordination Centre (SCC), including the College of Policing's Multi-Agency Gold Incident Command (MAGIC) training course.
- Resilience in a number of partner agencies was stretched, particularly Category 2 responders and those with regional responsibilities.
- This impacted on maintaining a physical presence at the TCC and participation in the TCG process.
- Some agencies not present on the ground outside normal working hours.
- Bank holiday staffing particularly over Christmas period was lacking.
- Sustained nature of the operation presented problems for maintaining staffing at TCC / SCC.

Page 53 v

### A5.3 Command, Control, Co-ordination & Communications

- The operation was acknowledged as being tactically led, those Districts / Boroughs which
  involved an Operational Coordination Group at Bronze level reported a higher level of multiagency understanding and coordination at ground level.
- Commonly Recognised Information Picture (CRIP) template to include location maps in future.
- Teleconferencing facilities in the SCC have now been upgraded to allow a greater volume of dial-in from partner agencies.
- The multi-agency room within the TCC at Medway has also been upgraded to allow hardwiring of partners IT systems, to allow a quicker transfer of information.
- It was considered that Airwave radio interoperability was not used to full effect on ground.
- Single countywide Silver control was acknowledged as being fit for purpose, non-blue light agencies would not have been able to cope with multiple TCCs.
- Decision to locate the Scientific & Technical Advice Cell (STAC) at TCC was considered sound, in view of the operation being tactically driven.
- Confusion about who the key decision maker should be for ordering evacuation.
- Clearer command protocols need to be developed between responsibilities of County / District / Parish councils e.g. evacuation, sandbag distribution.
- KRT to develop clear guidance for partner agencies to understand decision making process and responsibilities of each agency in a range of civil emergency situations.

#### A5.4 Escalation, De-Escalation & Recovery

- Escalation from Severe Weather Advisory Group (SWAG) with a proportionate Silver Control, set-up to flex into a functional TCC was identified as good practice.
- Need to ensure understanding of status of incident to each agency.
- Clear and distinct lines of communication are needed to ensure dissemination of escalation / de-escalation of operations. It is not sufficient to only include this in CRIP or minutes from meetings.
- KRT to develop protocols for establishing tipping points at which point an event or situation
  escalates into an emergency and when the 'response' phase may be safely de-escalated
  into the 'recovery' phase.
- The relationship between the Recovery Working Group (RWG) and the SCG during the 'emergency' phase was unclear. However, recovery structures subsequently developed during Operation Sunrise 4 to be formalised and adopted by KRT as best practice.
- Menu of capabilities of agencies / organisations to be developed by KRT for assets available for on-going deployment during 'recovery' phase.

# A6. Floodline Warnings Direct Service (FWD) – information supplied by the EA

The EA will be working with affected communities, KCC and other partners, to learn the
lessons of the flooding and how it can make its FWD service even more effective. This will
include providing warnings to communities that were not able to receive a warning, making
warnings more focussed on particular communities, and developing Flood Warden schemes
in at risk communities.

Page 54 vi

- One of the challenges during the flooding was providing consistent and trusted information
  to communities prompting appropriate action. Where Flood Wardens or community leaders
  were able to be involved in this activity it proved effective. The EA is working with Parish
  Councils, District / Borough Councils and KCC to establish Flood Warden Schemes in
  communities, especially those with a complex flood risk where the benefit can be greatest.
  Amongst others, the communities of central Tonbridge and Hildenborough are communities
  where we are supporting flood wardens.
- Registering with FWD allows customers to register multiple contact details (mobile, e-mail etc) and manage which messages they receive e.g. Flood Alerts, Flood Warning no-longer in force etc. This increases our ability to get a message through, and provide a good level of service. In areas of relatively low take-up e.g. where fewer people have registered) the EA has automatically registered properties. This is a positive step because it allows the EA to provide a service and warning to those who wouldn't otherwise have received one. However, it only uses home landline contact details (provided by BT). This therefore has a higher message failure rate, and because people haven't chosen to register, there is a lower level of engagement with the service
- The importance of receiving Flood Warnings means that a partnership effort is needed to encourage people to:
  - o Sign-up:

In some parts of Kent, take-up is as low as 51% of those properties for whom the EA is able to alert via the FWD Service.

o Keep their details up to date and provide multiple contact numbers:

The most common reason for warning messages not being received is out of date contact details. 1 in 4 people have been automatically signed-up to receive Flood Warnings, meaning that only basic contact details are available e.g. landline telephone.

Act: When they receive a Flood Warning: we have received some feedback that people
were waiting for a Severe Flood Warning to be issued before acting, when a Flood
Warning indicates immediate action required.

# Take-Up of the FWD Service Across Kent<sup>2</sup>

Percentage of 'at risk' properties offered the FWD Service	91%
Percentage of Flood Zone 2 properties registered	76%
Percentage of Flood Warning Area properties registered	84%

# Take-up of the FWD Service by District / Borough Council Area

Authority Area	Nos. of Properties Offered FWD Service	Take-up of FWD Service (Fully Registered)	Take-up of FWD Service (Automatically Registered)	% Take-up of Properties (Fully or Automatically Registered)
Ashford 2,360		1,459	1,012	104.70%
Canterbury	7,770	4,728	1,850	84.66%

<sup>&</sup>lt;sup>2</sup> Data correct as of 31/03/14

Page 55 vii

Authority Area	Nos. of Properties Offered FWD Service	Take-up of FWD Service (Fully Registered)	Take-up of FWD Service (Automatically Registered)	% Take-up of Properties (Fully or Automatically Registered)
Dartford	3,198	844	1,365	69.07%
Dover	7,591	5,424	1,241	87.80%
Gravesham	2,125	554	808	64.09%
Maidstone	2,966	1,440	917	79.47%
Sevenoaks	1,738	1487	467	112.43%
Shepway	133,80	8,741	3,092	88.44%
Swale	9,981	3,686	3,788	74.88%
Thanet	671	133	215	51.86%
Tonbridge & Malling	3,715	2,200	972	85.38%
Tunbridge Wells	542	276	149	78.41%

# A7. Potential Future Flood Defence Schemes in Kent – information supplied by the EA

# A7.1 Leigh Flood Storage Area (FSA)

The EA is working hard to communicate better the purpose of the Leigh FSA and its operation<sup>3</sup>. On 24<sup>th</sup> December, 5.5million cubic metres of water were stored at the Leigh FSA. By operating the Leigh FSA the EA was able to reduce the 342m<sup>3</sup> / second of water entering the FSA reservoir down to 160m<sup>3</sup> / second flowing downstream and continued to moderate the persistently high water levels during 25<sup>th</sup> and 26<sup>th</sup> December.

# A7.2 East Peckham

- The EA will use its analysis of the event to test the proposed River Medway and Bourne
  East Peckham Flood Alleviation Scheme (FAS). It discussed this proposed scheme with
  East Peckham Parish Council in summer 2012 and, if constructed, it would protect all
  developed areas of East Peckham and Little Mill. The EA hopes to start the scheme design
  in November 2014.
- The EA's review of the event will also cover the operation of its existing assets (including the Coult Stream FSA), to see if there is anything more can be done to maximise their performance.

### A7.3 Yalding

 Yalding is a particularly vulnerable location. 197 properties were flooded when river levels peaked on 24<sup>th</sup> December 2013. This flooding was comparable to the 1968 flood and worse than in 2000, when 119 properties flooded.

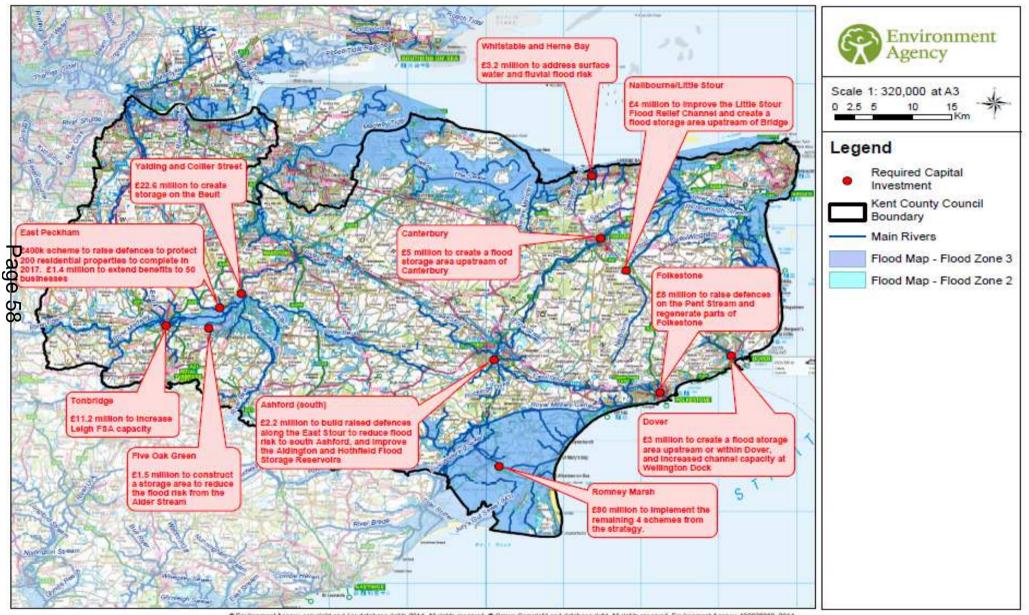
-

Page 56 viii

<sup>&</sup>lt;sup>3</sup> http://m.youtube.com/watch?v=336-6IN-J2I

- The EA is urgently investigating whether it can accelerate projects to reduce the risk of flooding in Yalding. There is no single solution that will benefit the whole community because of the way the homes and businesses are spread out. It is using the data it has collected from the recent flooding to review our understanding of the way floods happen in the catchment. This will help present the best case to gain funding for future schemes.
- The EA is investigating if it can further localise the current Floodline Warnings Direct (FWD)
  Service for Yalding. The data it is currently collecting from a project to improve the flood risk
  modelling for the River Medway will help the EA to improve further its forecasting and flood
  warning.
- Future works to reduce the risk of flooding are set out in the Middle Medway Strategy which
  was developed in 2005 and updated in 2010. The EA has considered a number of potential
  schemes to reduce flooding in Yalding.
- An option that residents are keen to progress is to find a suitable location to store water on the lower reaches of the River Beult.
- The Middle Medway Strategy also recommended that the Leigh FSA be raised by 1m giving an additional 30 per cent storage capacity.
- However, under Government funding rules, most of the schemes will need substantial contributions from external partners in order to proceed see A6.4 and A6.5 for details.
- The EA has secured funding to progress a feasibility study into both options. It is anticipated this work will be completed by summer 2015. KCC has offered to part fund an additional FSA on the River Beult at Stile Bridge and an increase in the capacity at the Leigh FSA. The EA has submitted its funding bid to secure the additional £17.6m needed to complete both schemes. If this is successful, the earliest construction could start would be in the financial year 2017-2018.
- The EA will continue to work with KCC, Maidstone Borough Council (MBC), Tonbridge & Malling Borough Council (TMBC) and other professional partners to identify partnership funding opportunities which will increase the likelihood of the above works going ahead.

# A7.4 Future Capital Investment Requirements for Potential Future Flood Defence Schemes



# A7.5 Priority Schemes Currently Not Qualifying for FDGiA Without Partnership Contributions

Scheme	Estimated cost	Nos. of properties to which flood risk would be reduced	Raw partnership funding score	Required partnership contribution	Final partnership funding score (including contribution)	Planned completion
Lower Beult Storage	£22.6m	1,151	36%	£16m	125%	2020
Increased Storage at Leigh	£11.2m	2,151	74%	£5m	130%	2019
Five Oak Green Flood Alleviation Scheme	£1.5m	266	46%	£900k	100%	2018 (only achievable with contributions)
South Ashford Flood Alleviation Scheme	£2.2m	282	24%	£1.7m	100%	2019 (only achievable with contributions)
Panterbury O O O O	£5m	1364	144%	N/A	N/A	2020 (dependant on investigations and consultations)
റ്റ Romney Marsh	£80m	14,500	119%	£3m	N/A	2022
Whitstable & Herne Bay	£3.2m					
Dover	£3m		Projects i	n early stages of dev	velopment	
Folkestone	£8m					
East Peckham	£400k	200 domestic	165%	N/A		2017
	£1.4m	50 businesses	50%	£1m	100%	This scheme will currently only defend homes in East Peckham. Additional funding required for an extension of the protection to businesses.

# A8. Other Flood Risk Management Options – information supplied by EA and KCC

# A8.1 Summary of Ongoing EA Work

- The EA is keen to learn with communities, and gain a clearer understanding of the impacts of these events on people, its assets and the environment. Also to discuss how, collectively, it can improve its preparations for and response to future events.
- The EA has worked with partners to visit affected communities and attended public meetings across the County. These meetings were an opportunity for people to learn about the risks associated with flooding, to share their experiences and to find out what they can do to better prepare themselves for flooding.
- It was also an opportunity to discuss how flood protection assets, such as the Leigh Flood Storage Area (FSA), are operated to reduce the impact of flooding.
- Attending community events, including flood fairs, hosted by Parish and District / Borough Councils taking place in communities impacted by the recent flooding.
- Holding one-to-one meetings with residents.
- Planning to give residents the opportunity to visit the Leigh FSA.
- A review of the Flood Warnings issued will help the EA to understand if their warnings were timely, appropriate and relevant to those who were affected.
- Identify that new or improved warning areas are required in Hildenborough and Yalding and are investigate how the EA can localise the current Flood Warning Service.
- Work with partners to set up and support a number of Flood Warden schemes.
- Distribute questionnaires to affected communities to find out more about the extent and impact of the flooding to improve EA flood maps and Flood Warning areas.

### A8.2 Spatial & Land-Use Planning & Drainage

- The EA's role as a statutory planning consultee is to provide advice to local planning authorities to manage flood and environmental risks and enable sustainable growth. We do not receive government funding to protect development built after 2012. It is therefore vital that flood risk is managed within the planning system. The EA works with partners to seek solutions to overcome these risks. Where risks cannot be overcome and development is contrary to the National Planning Policy Framework (NPFF), the EA recommends planning authorities refuse applications.
- In line with the NPFF we recommend that development is outside the flood plain. If this is not feasible the EA provides advice to Local Planning Authorities (LPAs) to ensure that people are not put at risk and that flood risk is not passed downstream.
- LPAs must ensure that Emergency Plans are fit for purpose to ensure that access and egress is still possible in flood conditions. In all circumstances where warning and emergency response is fundamental to managing flood risk, the EA advise LPAs to formally consider the emergency planning and search & rescue implications of new development in making their decisions.
- It is Local authority responsibility to ensure that flood resilience measures are incorporated
  into building design. The EA still advise on surface drainage at sites over 1 hectare. The
  future implementation of Sustainable Drainage Systems (SuDS) Approving Bodies (SABs)
  will mean that KCC and Local authorities will need to manage surface water risks,
  groundwater flooding and access and egress within the planning process.

Page 60 xii

# A8.3 Personal Flood Resilience

- A 'Property-Level Protection Scheme' is already in place in Lamberhurst. In response to Flood Warnings these measures were deployed by residents, and greatly reduced the flood impact. Funding is also now in place to adopt similar measures in Aylesford.
- District / Borough Councils have been proactively promoting the Central Government 'Repair & Renew Grant'<sup>4</sup> but take-up across the County has been patchy. However, as at 10<sup>th</sup> April 2014, T&MBC had received 49 requests for further information, 20% from businesses.
- The EA and KCC have also been supporting flood fairs in various locations around the County (see section A3 of this appendix for further details) where residents have been investigating their personal flood resilience options.

# A8.4 Investigating & Improving Support to Communities with High / Complex Flood Risk Profiles

- The EA has heard from affected communities that there are often multiple sources of flooding and that the appropriate flood risk management options required are complex to determine.
- The EA has therefore promoted the formation of Multi-Agency Flood Alleviation Technical Working Groups across the County to explore future options.
- Groups that have already met (including existing groups):

 Tonbridge & Malling (Hildenborough, Tonbridge & East Peckham)

Five Oak Green

Aylesford

o Edenbridge

Yalding

Collier Street

Canterbury – Nailbourne

New groups still to meet:

Maidstone

Forest Row

Lamberhurst

Staplehurst

Headcorn

Faversham

Westerham

Sundridge & Brasted

# A8.5 Surface Water Management Plans (SWMPs)

In order to understand the risks from local flooding KCC has undertaken a number of studies across the county to collect and map data on these floods. These studies are known as Surface Water Management Plans (SWMPs). These documents vary in their nature, some are high-level assessments of the risks, while others are in-depth studies of the causes and potential solutions to local flooding. SWMPs can be found on the KCC website.

Page 61 xiii

Eynsford\*

South Darent & Horton Kirby\*

Key:

\* Still to be established if wider group needed

<sup>&</sup>lt;sup>4</sup> A scheme providing up to £5,000 per flood-affected home or business to contribute to the costs of additional flood resilience or resistance measures.

- During 2014-15 KCC will continue to develop SWMPs, and will undertake studies in Marden, Staplehurst, Headcorn and Paddock Wood (all areas impacted by varying degrees of local flooding during the winter). KCC will also be exploring the opportunities to manage local flooding identified by the recently completed SWMPs in Folkestone, Margate and Dartford. SWMPs include an Action Plan of measures that can be used to manage local flooding identified by the study. However, many options require funding in order to be delivered, this funding is drawn from the same Defra fund, which is administered by the EA, as all other flood risk management investment, and each scheme must compete for funding.
- Additionally, KCC is currently co-ordinating the development of local flood risk documents that provide local communities with a simple overview of the range of flood risks in their area. KCC is working with the EA, Internal Drainage Boards (IDBs), Local authorities and water companies to prepare a pilot document. The document will show what the main flood risks are, where significant assets are, which authorities exercise risk management functions in the area, any plans or strategies they may have in hand to manage flood risks in the future and who to get in touch with for more information. Initially, the pilot will focus on the Canterbury City Council (CCC) area. If this proves successful it will be rolled out across the County, with TMBC and MBC areas likely to be considered next.

# A8.6 Little Stour, Nailbourne & Petham Bourne Flood Management Group

- The EA, KCC, CCC, Shepway District Council, Southern Water, and representatives from key Parish Councils are investigating the causes and effects of the flooding experienced during the winter of 2013/14 in the Nailbourne, Little Stour and Petham Bourne valleys. These partners are working together to assess the options to manage this winter's flooding, and are seeking to reduce the potential for disruption in the future.
- The Nailbourne, Petham Bourne and parts of the Little Stour are groundwater fed watercourses. This means that they are dry for long periods of time. However, following periods of prolonged rainfall groundwater levels in the underlying aquifers rise to a point where water emerges through springs throughout the length of these valleys, and the streams begin to flow.
- The Nailbourne has been flowing since mid-January and has approached near-record levels. There has been extensive flooding of farmland, with internal property flooding reported in Bridge, Patrixbourne, Bishopsbourne and Barham. The Petham Bourne, which typically flows less frequently than the Nailbourne, has also been active over the winter causing flooding and disruption. The Little Stour has burst its banks in a number of locations, also flooding farmland properties and roads.
- Owing to the high flows experienced this winter, many culverts have been overwhelmed in these valleys. At its peak, portable pumps were used to help move water over the culverts in some places, and sandbags were used extensively to protect many properties.
- The group will be undertaking three main activities:
  - 1. Survey the measures put in place over the course of this winter to manage and reduce flooding. This will provide a blueprint for future events, and will help enable us to mobilise and deploy necessary equipment in time if the groundwater levels rise again.
  - 2. Identify any opportunities that can be delivered as quickly as possible to reduce the impact of flooding should these watercourses flow again next winter.
  - 3. Identify opportunities to reduce the impact of flooding that can be delivered over a longer timeframe. These measures will require further investigation, more detailed design work and an application for additional funding.

Page 62 xiv

KCC - Kent County Council Highway Services

# **SWALE JOINT TRANSPORTATION BOARD (JTB)**

# Updates are in italics

Minute No	Subject	SBC/ KCC	Recommendations Made by Board	KHS - Comments/date due back to JTB	SBC - Comments/date due back to JTB
730/03/11 Page	Highway works programme 2010/2011	KCC	Mill Way, Sittingbourne Asda site – signalising junction. Design check complete - awaiting Developer to progress S278 Agreement	White lining changes needed. Ponding on tactile crossing. Pedestrian barriers needed to prevent cutting through landscaped area. Contractors due to commence on site 3 March 2014.  Site remedial and completion works carried out. – As Built drawings being prepared by developer's consultant.	
63			Sittingbourne Retail Park site	Widening of approach road from Sittingbourne Retail Park to the new traffic signal junction is still being pursued. It is necessary to relocate some statutory undertakers' plant and this work has been ordered but not yet programmed. Once completed, then the approach road will be widened to two lanes which will increase the capacity of the junction.  Statutory Undertakers Service diversion programmed to be carried out during September.	Agenda Item

Minute No	Subject	SBC/ KCC	Recommendations Made by Board	KHS - Comments/date due back to JTB	SBC - Comments/date due back to JTB
590/03/12	Highways at the junction of Warden Bay Road and B2231 Leysdown Road	KCC	That the 30mph boundary be moved, and that costs associated with moving the 30mph boundary and associated signing be met by KCC Councillor Mr Adrian Crowther's Member Highway Fund.	Funding has been allocated in the financial year 2014/15 for a School Safety Zone outside	
Page 64	Subsequent related Minute No. 67/06/13 –  Eastchurch Primary School pedestrian crossing petition	КСС	(1) That a letter be sent to KCC Highways to include the points made by the Ward Member regarding the crossing, risk assessments and the re-location of the 30mph zone and a more detailed report be submitted to a future JTB meeting.	Eastchurch CE Primary School. An outline design has been drawn up and shared with the Head Teacher. Wider consultation is programmed to take place during August 2014.	
	Subsequent related Minute No. 469/12/13 Swale Cycling Strategy	KCC	(1) That further work is undertaken on the suggestions put forward during the consultation with a view to adding these to the Swale Cycling Strategy.	Further work to be reported to a future Board meeting.	
235/09/13	A2 / A251 Junction, Faversham	KCC	(1) That both proposed traffic improvements (Annex 1 and 2 in the report), the inclusion of consideration of the junction of The Mall and the A2, plus the option of 'no change', be approved for the purposes of a wider public consultation and the results of the consultation brought back to the JTB at a later date.	At the June 2014 meeting, the JTB resolved to recommend proceeding with the roundabout option.	
	Subsequent related Minute No. 72/06/14 A2/A251 Junction, Faversham Highway Improvement Scheme	KCC	1) That Option B (roundabout) be progressed as the preferred option for the A2/A251 junction, Faversham.		
238/09/13	Highway improvements, Minster	KCC	(1) That the proposed highway improvements at Minster on Sea be approved for consultation.	Consultation and detailed design is progressing. Pedestrian crossings on Minster Road and Chequers Road in the vicinity of Minster	

Minute No	Subject	SBC/ KCC	Recommendations Made by Board	KHS - Comments/date due back to JTB	SBC - Comments/date due back to JTB
				Primary School and St George's Primary School are in detailed design for construction later this year.	
467/12/13	Faversham Town Centre Parking restrictions	SBC	(1) That the progression of a Traffic Regulation Order to amend the parking restrictions within the core town centre area of Faversham to allow evening parking be agreed.		Completed
468/12/13	Formal objections to Traffic Regulation Order Amendment 8B	SBC	(1) That the proposed waiting restrictions in the Capel Road area of Sittingbourne be progressed.		Completed
624/03/14 Page 625/03/14	Informal Consultation Proposed Waiting Restrictions Lower Road/Selby Court, Teynham	SBC	(1) That waiting restrictions are introduced as detailed in the first consultation.		Formal Objection to Traffic Order over-ruled by Director of Highways & Transportation. New Waiting Restrictions now complete.
625/03/14 <b>9</b> 1	Formal Objections To Traffic Regulation Order Amendment 9a And 9b	SBC	(1) That The Proposed Waiting Restrictions Be Progressed In/At: Faversham Town Centre; Oak Close/Maidstone Road, Danaway; The Broadway, Minster; Key Street, Sittingbourne; Various Junctions Sheerness – Alma Road/Fonblanque Road; Residents' Parking Bay Outside 99 Ufton Lane, Sittingbourne.		Completed
630/03/14	Installation And Removal Of Disabled Bays	SBC	<ol> <li>That the comments/objections made by the consultees be noted.</li> <li>That no more Disabled Bay Reports be submitted to the JTB until information on the criteria was looked into further.</li> <li>That bays be installed at: 7 Alma Road, Sheerness; 7 Sprotshill Close, Sittingbourne; 2 Manor Grove, Sittingbourne; and 38 St John's Avenue, Sittingbourne.</li> </ol>		Completed
70/06/14	Proposed Relocation of Sittingbourne Market	SBC	(1) That the preferred option for the relocation of Sittingbourne market at the top of the High Street be noted and that consideration be given to a phased approach to the project with the Saturday market to be progressed first, and the Friday market to be addressed separately to facilitate		Paper on proposed relocation of Sittingbourne Market discussed by Senior Management Team

Minute No	Subject	SBC/ KCC	Recommendations Made by Board	KHS - Comments/date due back to JTB	SBC - Comments/date due back to JTB
			quicker progress.  (2) That Officers proceed to the stage of drafting a Traffic Regulation Order and the procurement of services to support this work and preparation for formal consultation.		12.8.2014; Informal Cabinet/Cabinet agenda setting 26.8.2014 and Cabinet 10.9.2014.
71/06/14	Proposed waiting restrictions – Church Road, Eurolink Industrial Estate, Sittingbourne	SBC	(1) That the objections/comments made by the consultees be noted and that waiting restrictions be introduced as detailed in the consultation plan.		Traffic Regulation Order being progressed (Amendment 11).
72/06/14 P age 66	A2/A251 Junction, Faversham Highway Improvement Scheme	KCC	(1) That Option B (roundabout) be progressed as the preferred option for the A2/A251 junction, Faversham.		