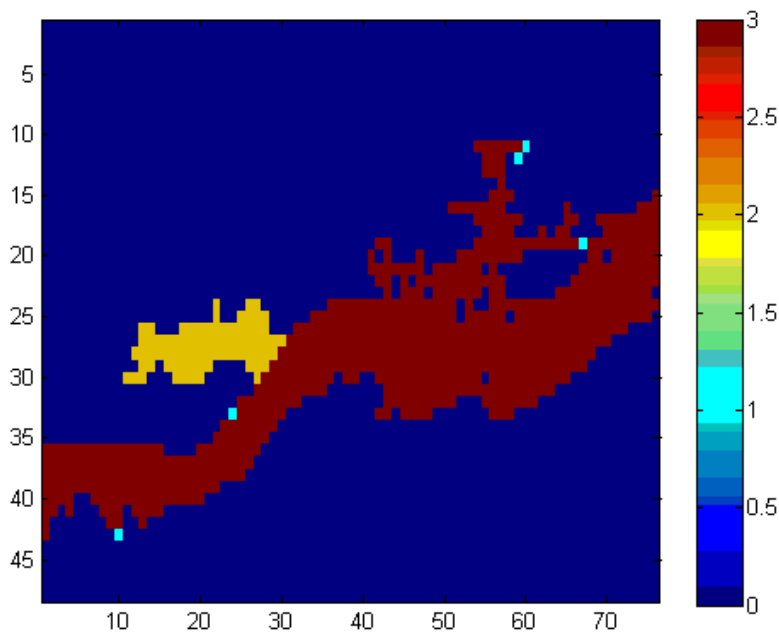


### Answers to exercise: simulating and evaluating flood prevention measures

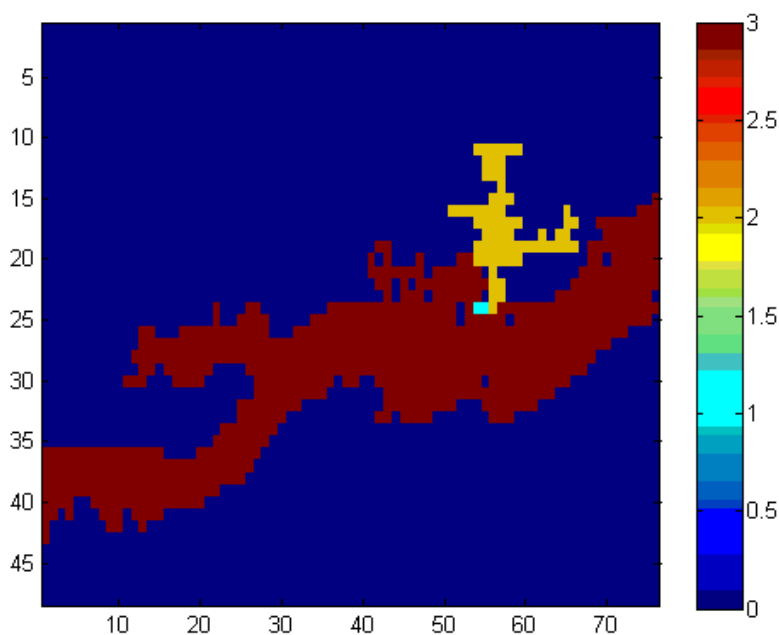
*Note: These answers are based on simulations using Lisflood version 5.8.6. Although results are not expected to change using future versions, very minor changes cannot be ruled out.*

Answers: On graphs **red** means flooding under original and alternative scenario, **yellow** are areas which do not flood with the alternative scenario but did originally, and **light blue** are areas which did not flood under original scenario but do under the alternative scenario, Answers correct on 17/06/2013 using lisflood version 5.8.6. Figures have been produced using MatLab.

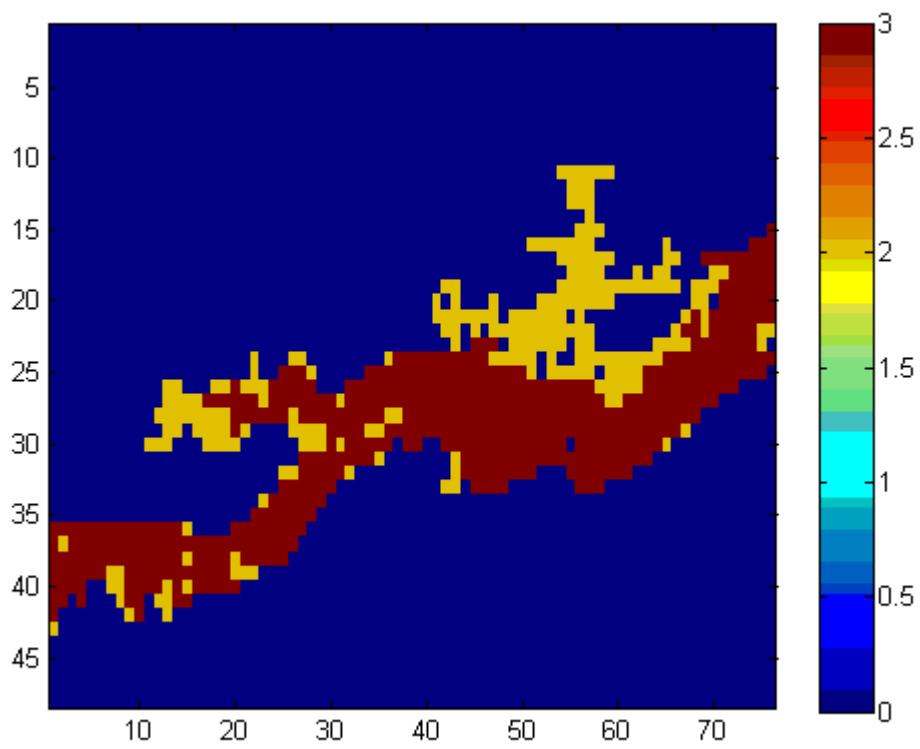
#### **Build wall – location 1**



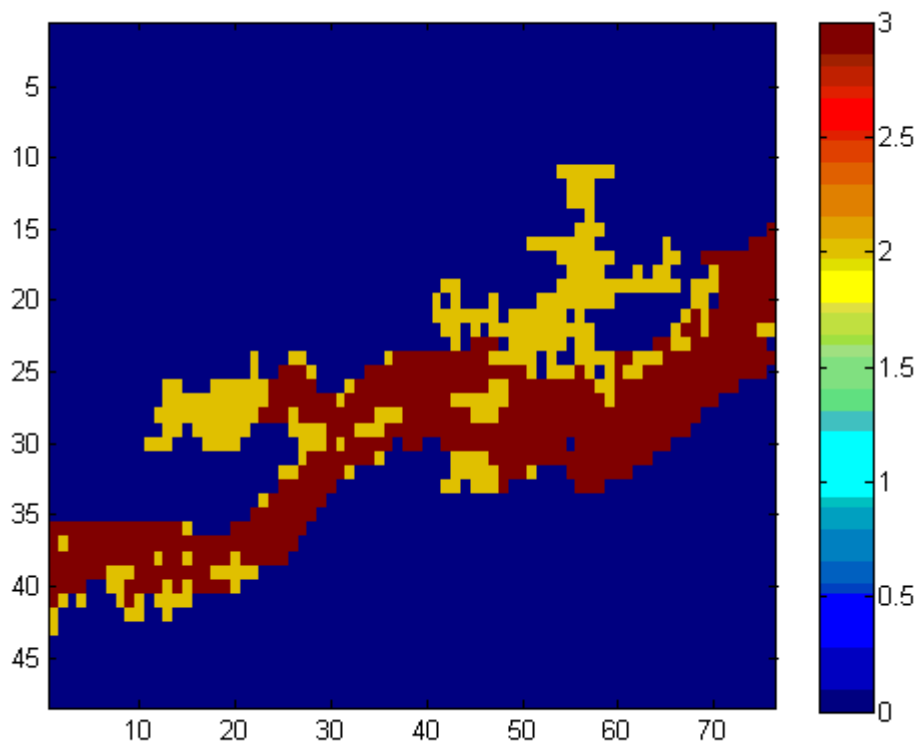
#### **Build wall – location 2**



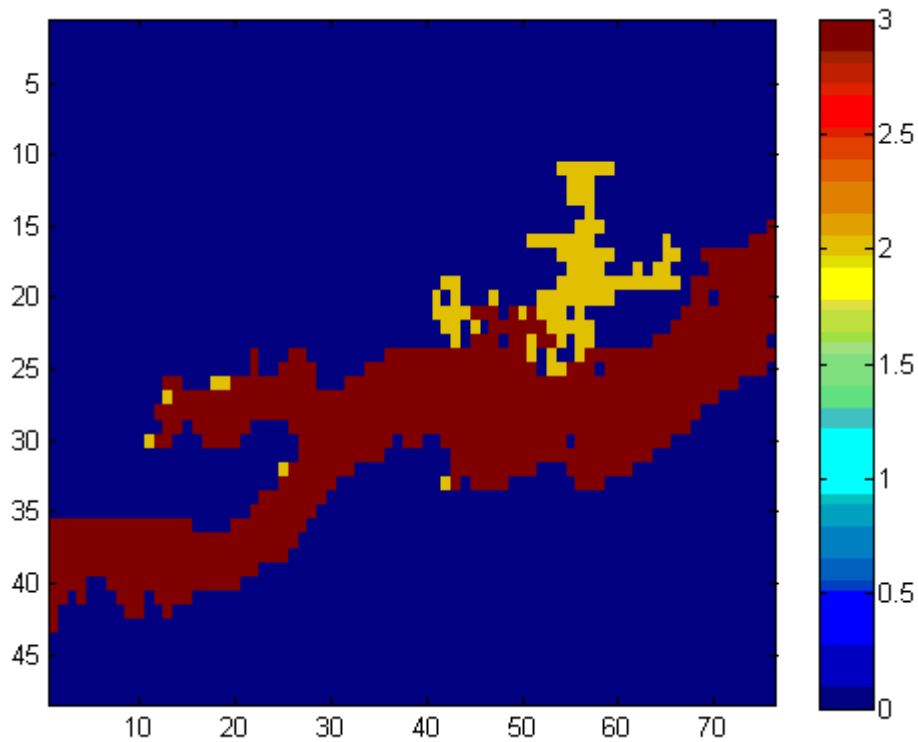
**Deepen channel**



**Widen channel**



## Extra channel



		Cost of areas saved from flooding						
Option	Price of scheme	Residential	Industrial	Commercial	Total	$\frac{\text{Price}}{\text{Savings}}$	Population saved	$\frac{\text{Price}}{\text{Pop. saved}}$
Wall 1	5000	10200	0	0	10200	0.49	420	12.0
Wall 2	5000	7125	0	0	7125	0.70	1260	4.0
Deepen	9000	19700	3500	1875	25075	0.36	2980	3.0
Widen	8000	18550	2500	1875	22925	0.35	2640	3.0
Channel	6500	7725	0	0	7725	0.84	1300	5

Note: Wall 1 is the only scheme which floods some areas which weren't previously flooded (residential). The cost of the buildings flooded is 525 and the population is 60.