



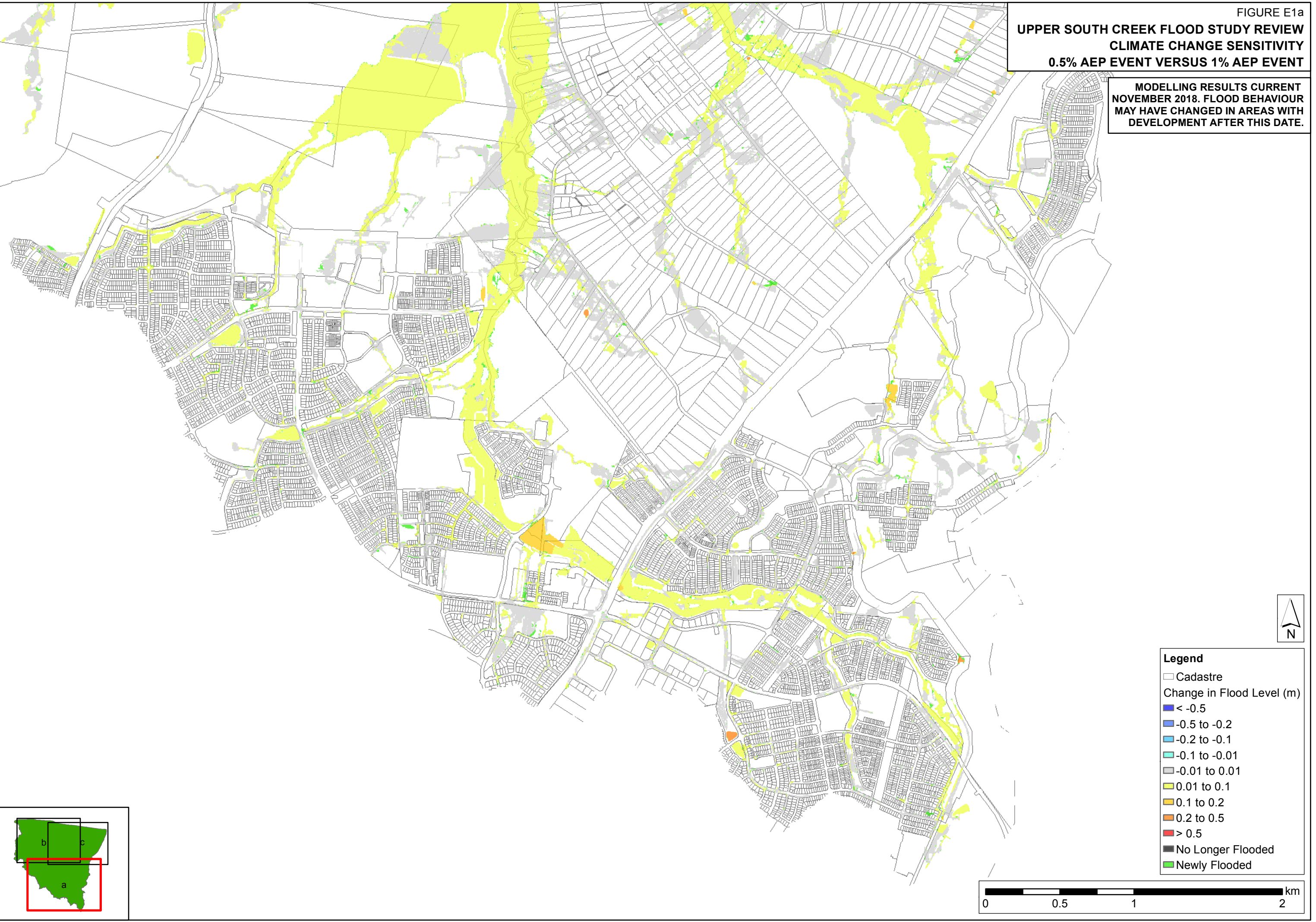
# CAMDEN COUNCIL PUBLIC EXHIBITION DOCUMENT 2022

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## REVIEW OF UPPER SOUTH CREEK FLOOD STUDY IN THE CONTEXT OF ONGOING DEVELOPMENT: APPENDIX E – SENSITIVITY RESULTS

(Draft Report)

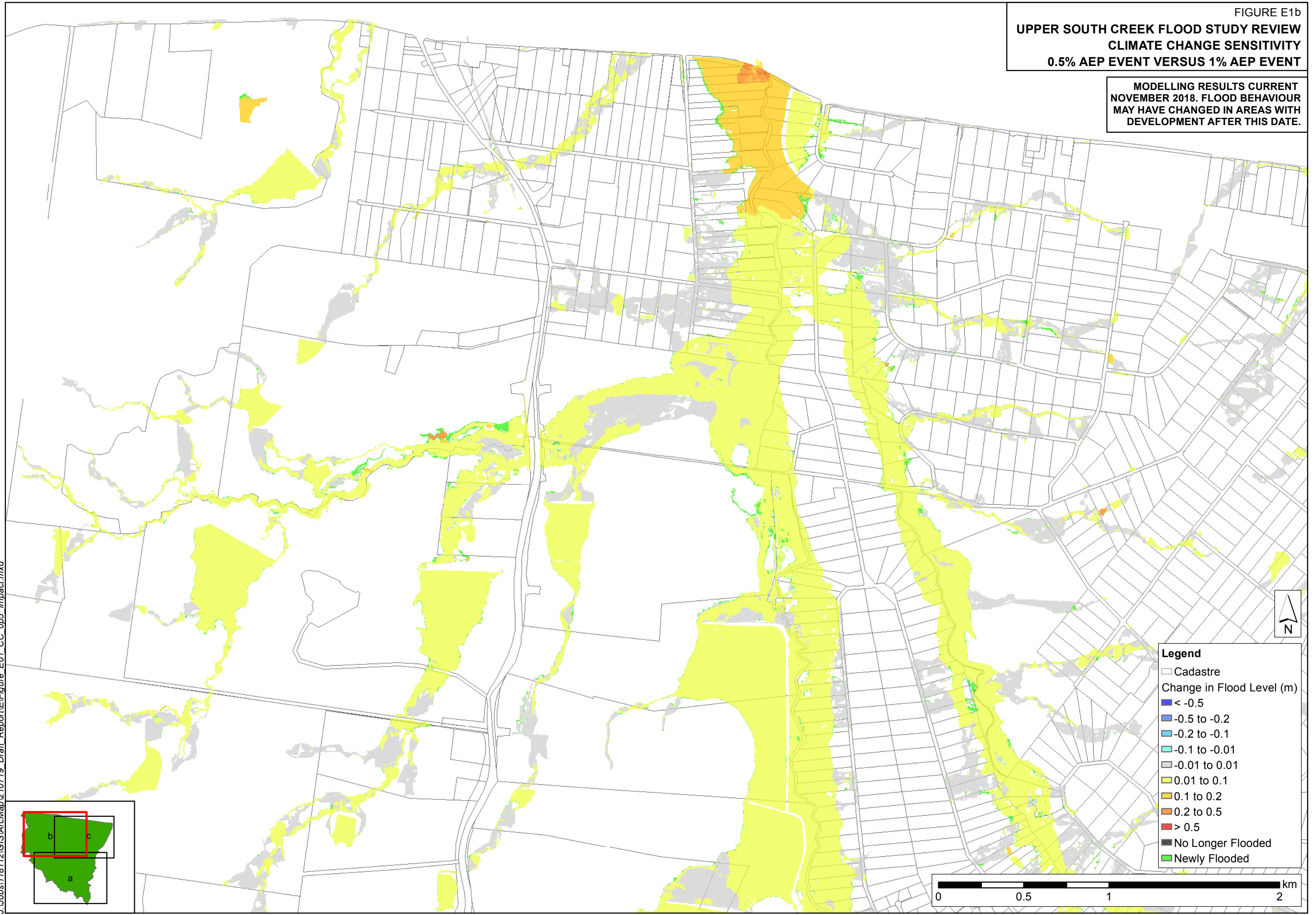
J:\Jobs\118112\GIS\ArcMap\210719 Draft\_Report\Figure E01 CC Op5 Impact.mxd





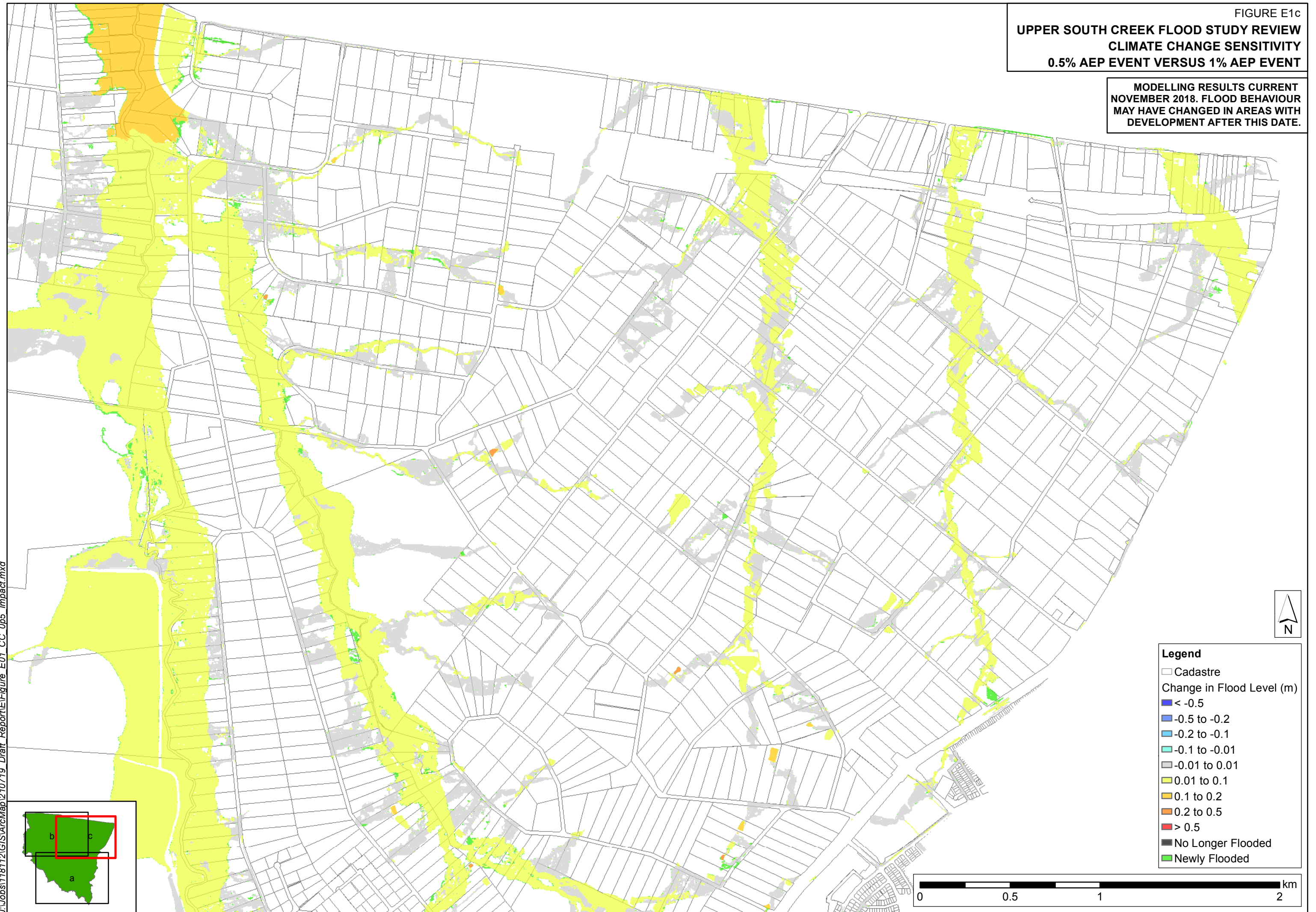
**UPPER SOUTH CREEK FLOOD STUDY REVIEW  
CLIMATE CHANGE SENSITIVITY  
0.5% AEP EVENT VERSUS 1% AEP EVENT**

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.



**UPPER SOUTH CREEK FLOOD STUDY REVIEW  
CLIMATE CHANGE SENSITIVITY  
0.5% AEP EVENT VERSUS 1% AEP EVENT**

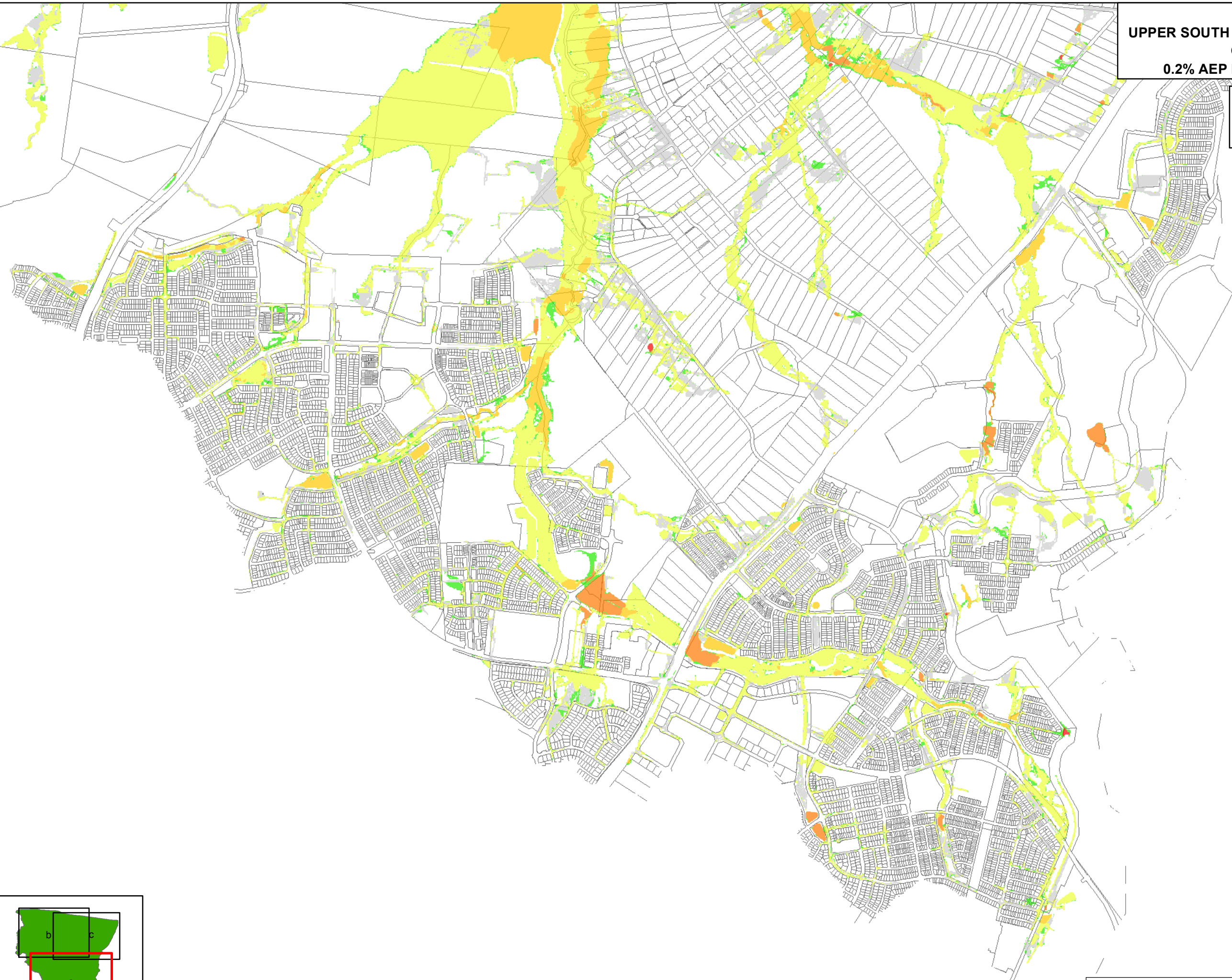
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NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.



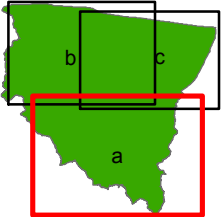
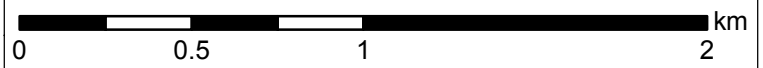


**UPPER SOUTH CREEK FLOOD STUDY REVIEW  
CLIMATE CHANGE SENSITIVITY  
0.2% AEP EVENT VERSUS 1% AEP EVENT**

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.



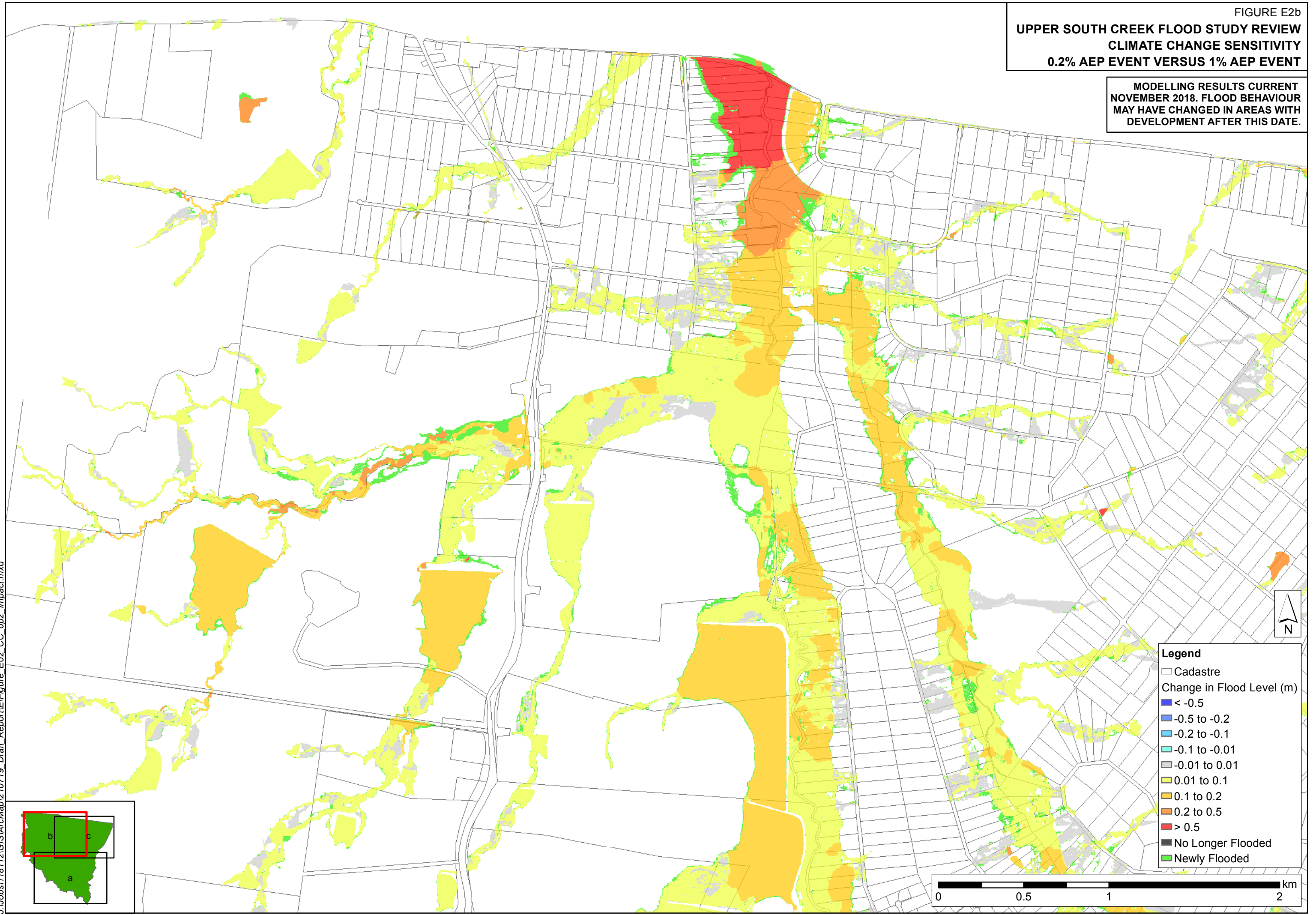
- Legend**
- Cadastre
  - Change in Flood Level (m)
  - < -0.5
  - -0.5 to -0.2
  - -0.2 to -0.1
  - -0.1 to -0.01
  - -0.01 to 0.01
  - 0.01 to 0.1
  - 0.1 to 0.2
  - 0.2 to 0.5
  - > 0.5
  - No Longer Flooded
  - Newly Flooded





**UPPER SOUTH CREEK FLOOD STUDY REVIEW  
CLIMATE CHANGE SENSITIVITY  
0.2% AEP EVENT VERSUS 1% AEP EVENT**

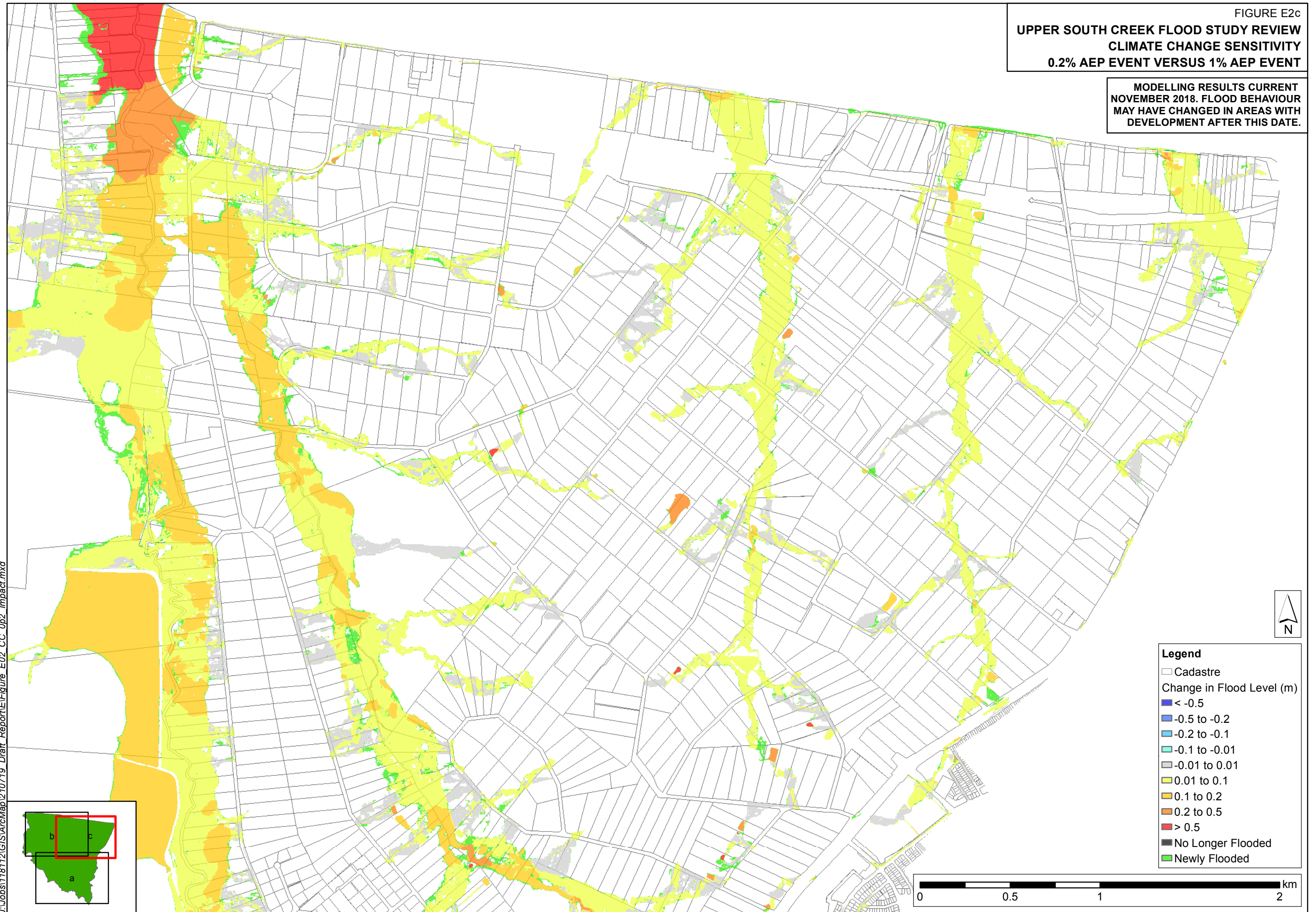
MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.





**UPPER SOUTH CREEK FLOOD STUDY REVIEW  
CLIMATE CHANGE SENSITIVITY  
0.2% AEP EVENT VERSUS 1% AEP EVENT**

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.



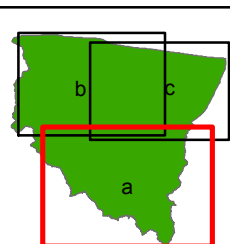
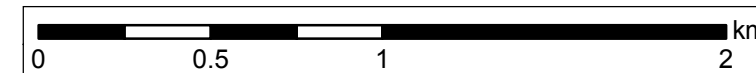


**UPPER SOUTH CREEK FLOOD STUDY REVIEW**  
**INITIAL LOSS +5MM SENSITIVITY**  
**1% AEP EVENT**

MODELLING RESULTS CURRENT  
 NOVEMBER 2018. FLOOD BEHAVIOUR  
 MAY HAVE CHANGED IN AREAS WITH  
 DEVELOPMENT AFTER THIS DATE.



- Legend**
- Cadastre
  - Change in Flood Level (m)
  - < -0.5
  - -0.5 to -0.2
  - -0.2 to -0.1
  - -0.1 to -0.01
  - -0.01 to 0.01
  - 0.01 to 0.1
  - 0.1 to 0.2
  - 0.2 to 0.5
  - > 0.5
  - No Longer Flooded
  - Newly Flooded





**UPPER SOUTH CREEK FLOOD STUDY REVIEW**  
**INITIAL LOSS +5MM SENSITIVITY**  
**1% AEP EVENT**

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.

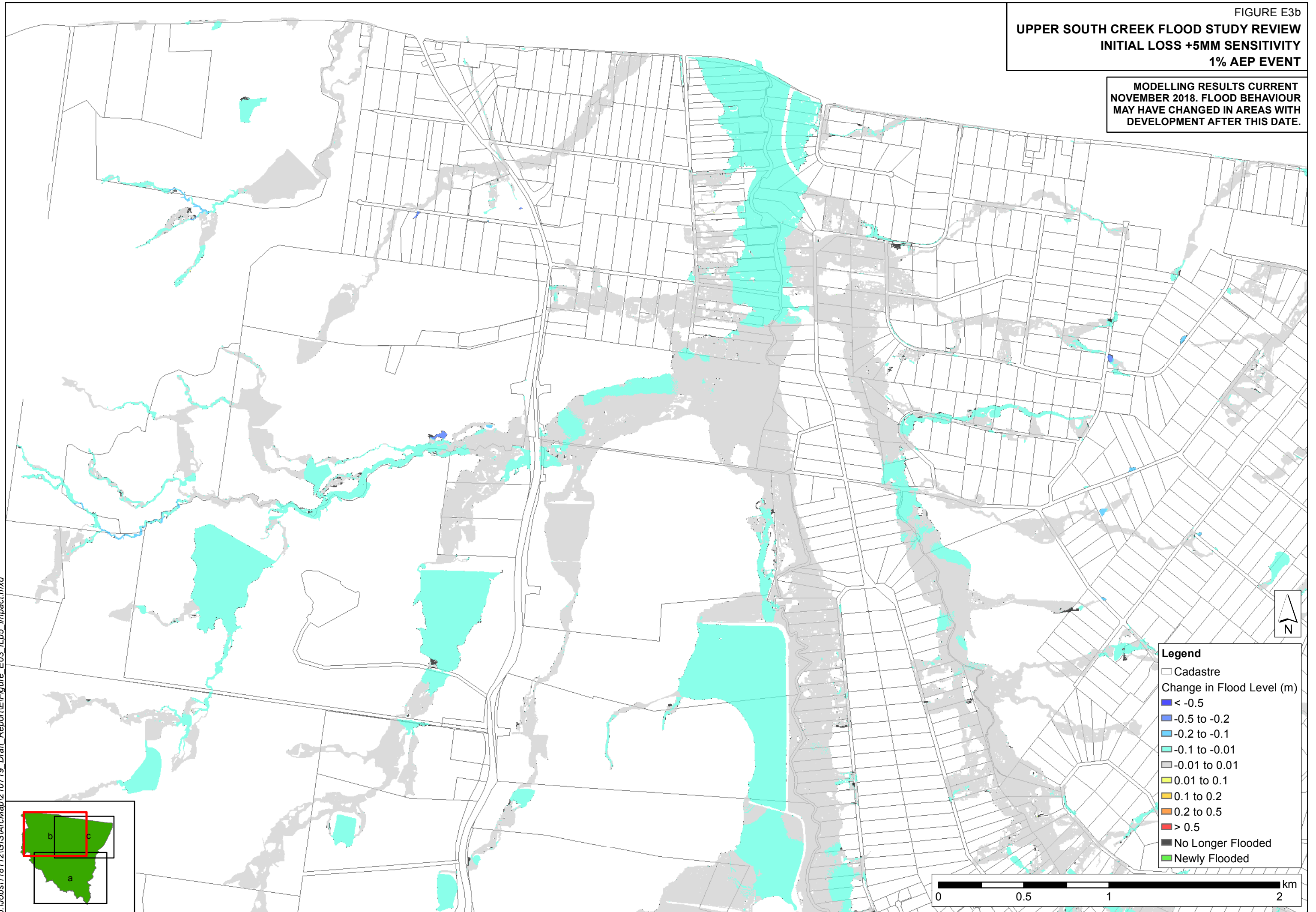
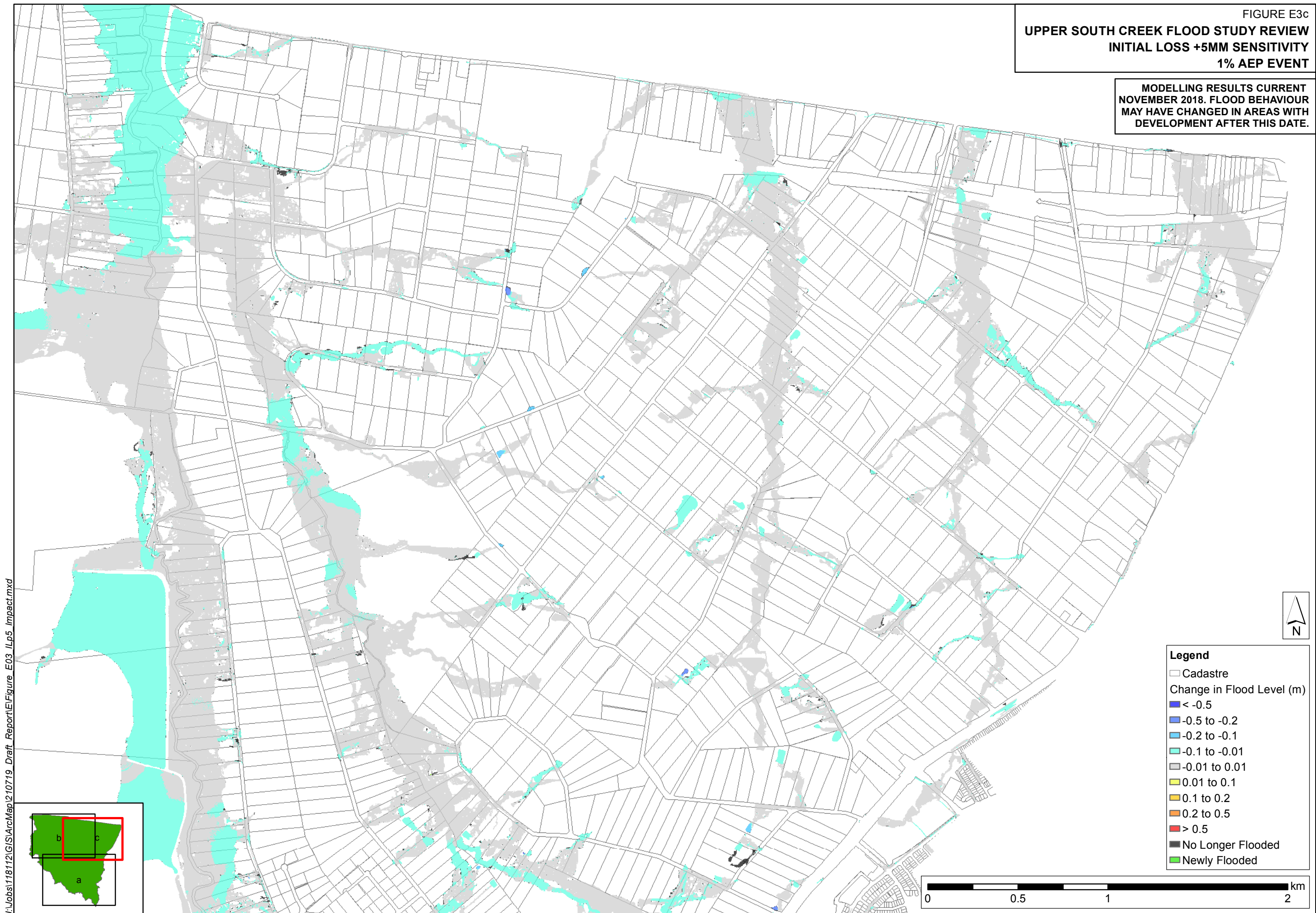


FIGURE E3c  
UPPER SOUTH CREEK FLOOD STUDY REVIEW  
INITIAL LOSS +5MM SENSITIVITY  
1% AEP EVENT

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.

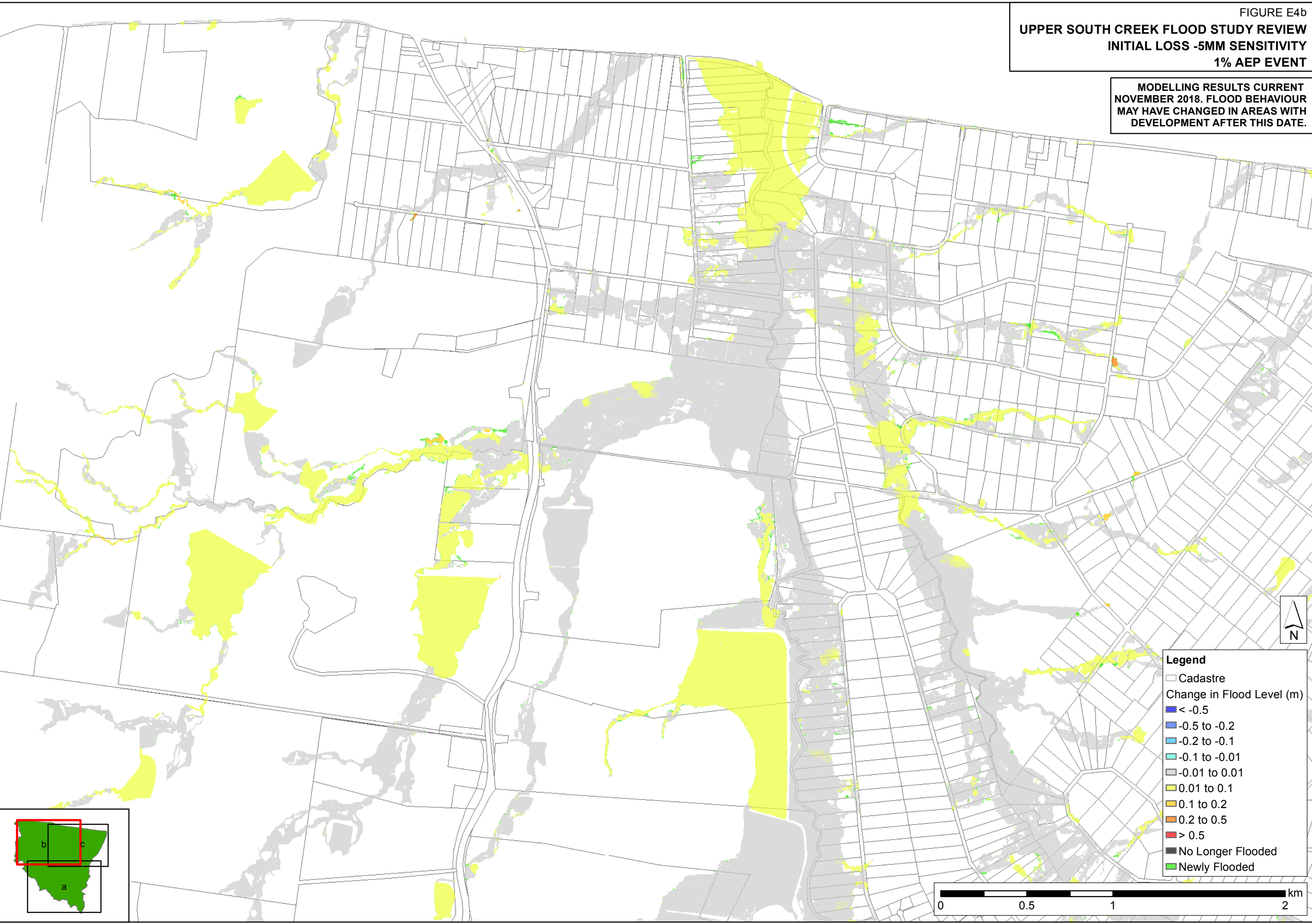






UPPER SOUTH CREEK FLOOD STUDY REVIEW  
INITIAL LOSS -5MM SENSITIVITY  
1% AEP EVENT

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.





**UPPER SOUTH CREEK FLOOD STUDY REVIEW**  
**INITIAL LOSS -5MM SENSITIVITY**  
**1% AEP EVENT**

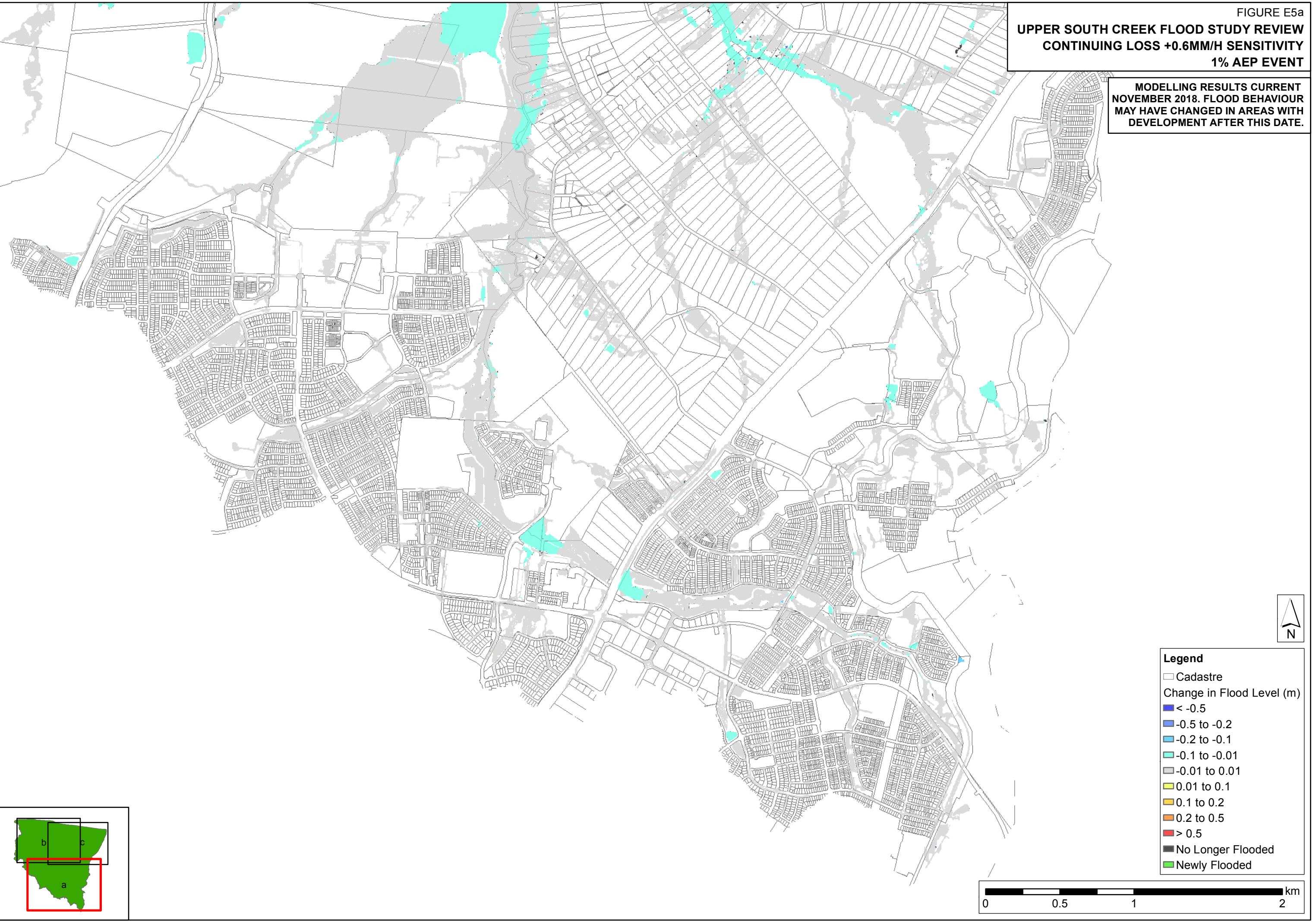
MODELLING RESULTS CURRENT  
 NOVEMBER 2018. FLOOD BEHAVIOUR  
 MAY HAVE CHANGED IN AREAS WITH  
 DEVELOPMENT AFTER THIS DATE.



- Legend**
- Cadastre
  - Change in Flood Level (m)
  - < -0.5
  - -0.5 to -0.2
  - -0.2 to -0.1
  - -0.1 to -0.01
  - -0.01 to 0.01
  - 0.01 to 0.1
  - 0.1 to 0.2
  - 0.2 to 0.5
  - > 0.5
  - No Longer Flooded
  - Newly Flooded



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**UPPER SOUTH CREEK FLOOD STUDY REVIEW**  
**CONTINUING LOSS +0.6MM/H SENSITIVITY**  
**1% AEP EVENT**

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.

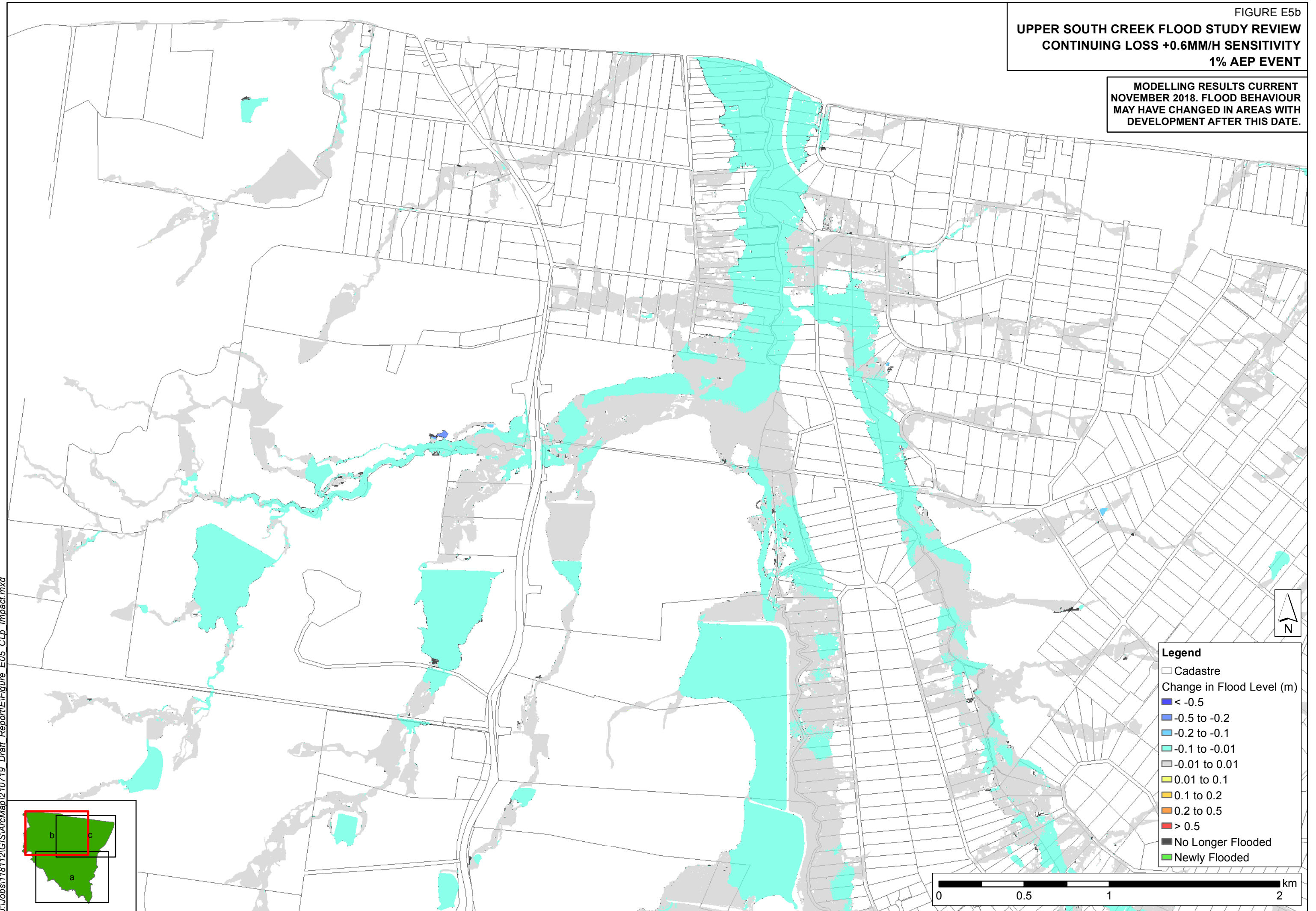
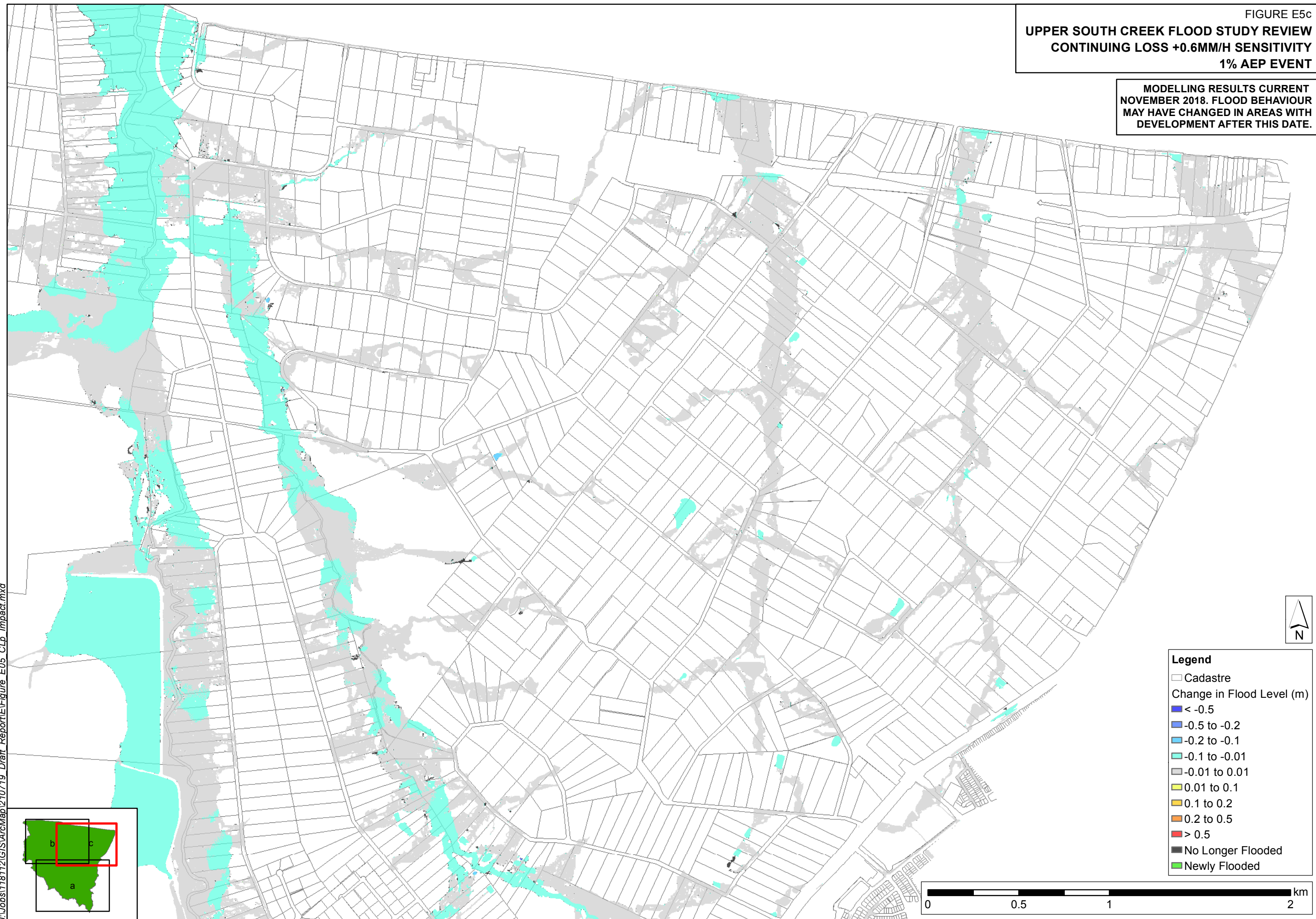


FIGURE E5c  
UPPER SOUTH CREEK FLOOD STUDY REVIEW  
CONTINUING LOSS +0.6MM/H SENSITIVITY  
1% AEP EVENT

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.





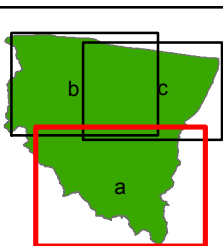
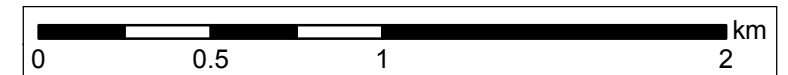
**UPPER SOUTH CREEK FLOOD STUDY REVIEW  
CONTINUING LOSS -0.6MM/H SENSITIVITY  
1% AEP EVENT**

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.



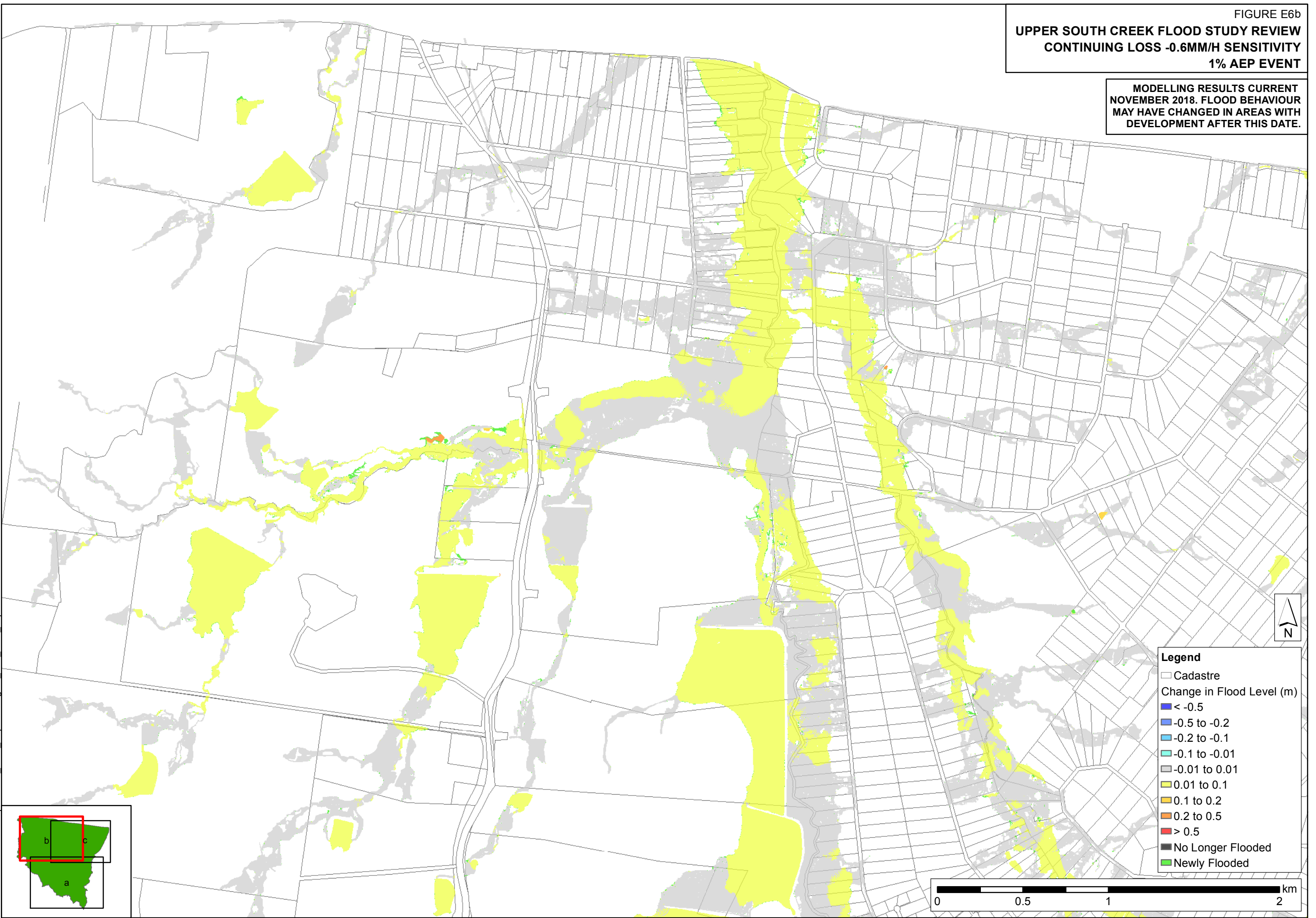
**Legend**

- Cadastre
- Change in Flood Level (m)
  - < -0.5
  - 0.5 to -0.2
  - 0.2 to -0.1
  - 0.1 to -0.01
  - 0.01 to 0.01
  - 0.01 to 0.1
  - 0.1 to 0.2
  - 0.2 to 0.5
  - > 0.5
- No Longer Flooded
- Newly Flooded



UPPER SOUTH CREEK FLOOD STUDY REVIEW  
CONTINUING LOSS -0.6MM/H SENSITIVITY  
1% AEP EVENT

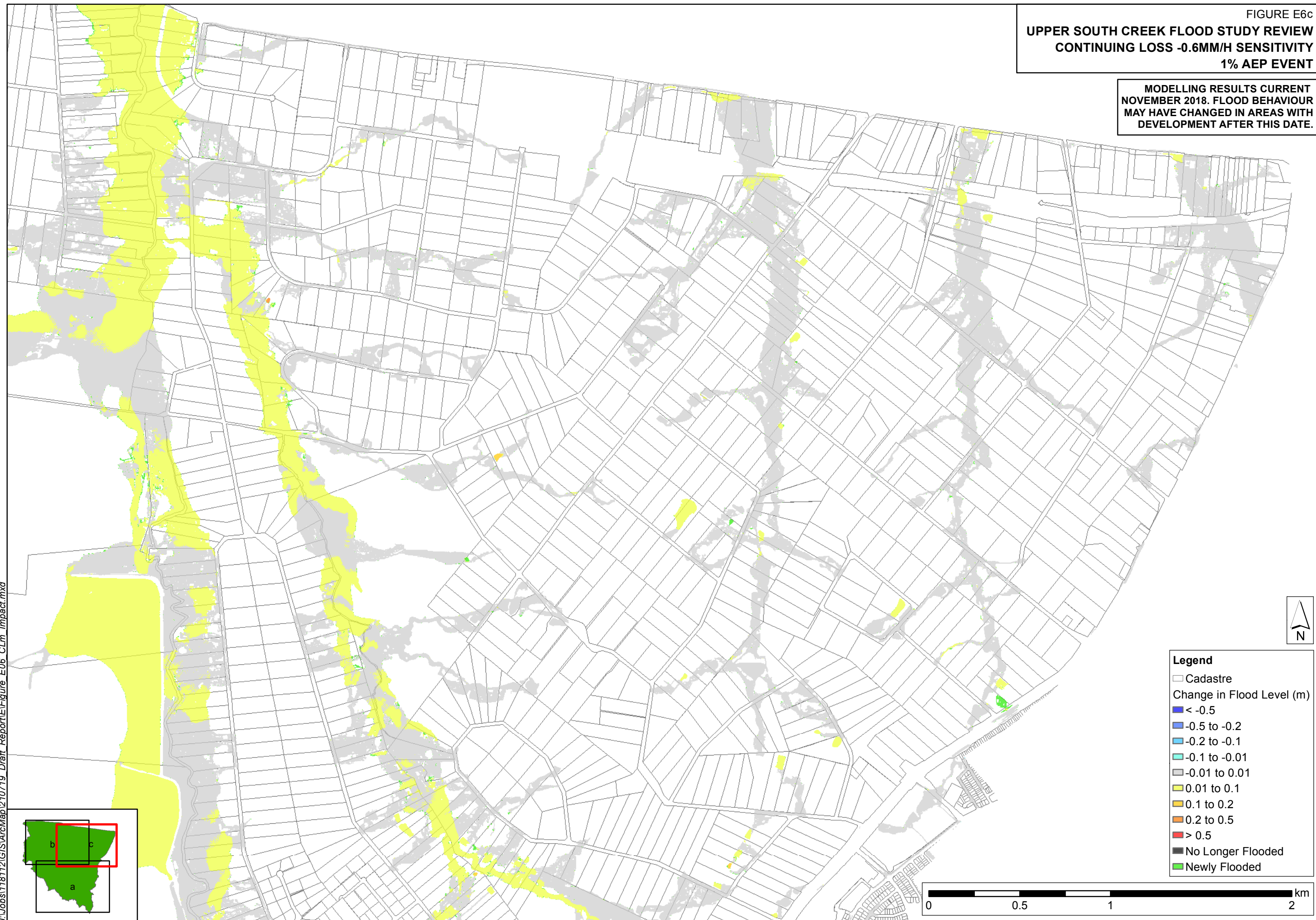
MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.





**UPPER SOUTH CREEK FLOOD STUDY REVIEW**  
**CONTINUING LOSS -0.6MM/H SENSITIVITY**  
**1% AEP EVENT**

MODELLING RESULTS CURRENT  
 NOVEMBER 2018. FLOOD BEHAVIOUR  
 MAY HAVE CHANGED IN AREAS WITH  
 DEVELOPMENT AFTER THIS DATE.



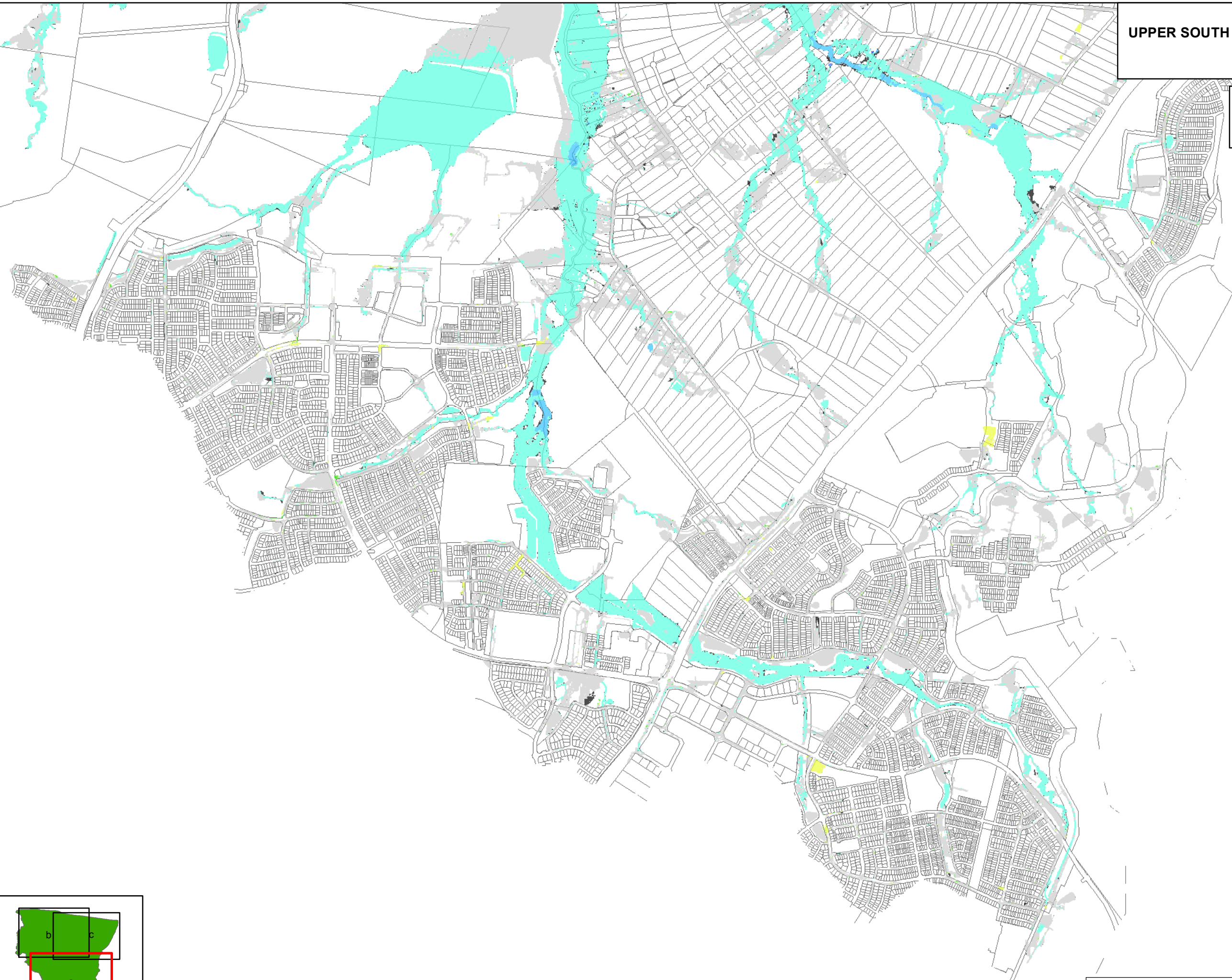
- Legend**
- Cadastre
  - Change in Flood Level (m)
    - < -0.5
    - -0.5 to -0.2
    - -0.2 to -0.1
    - -0.1 to -0.01
    - -0.01 to 0.01
    - 0.01 to 0.1
    - 0.1 to 0.2
    - 0.2 to 0.5
    - > 0.5
  - No Longer Flooded
  - Newly Flooded

0 0.5 1 2 km

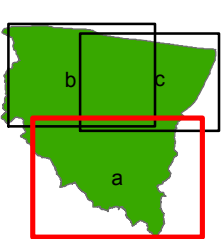
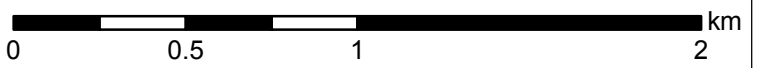


**UPPER SOUTH CREEK FLOOD STUDY REVIEW**  
**MANNINGS +20% SENSITIVITY**  
**1% AEP EVENT**

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.



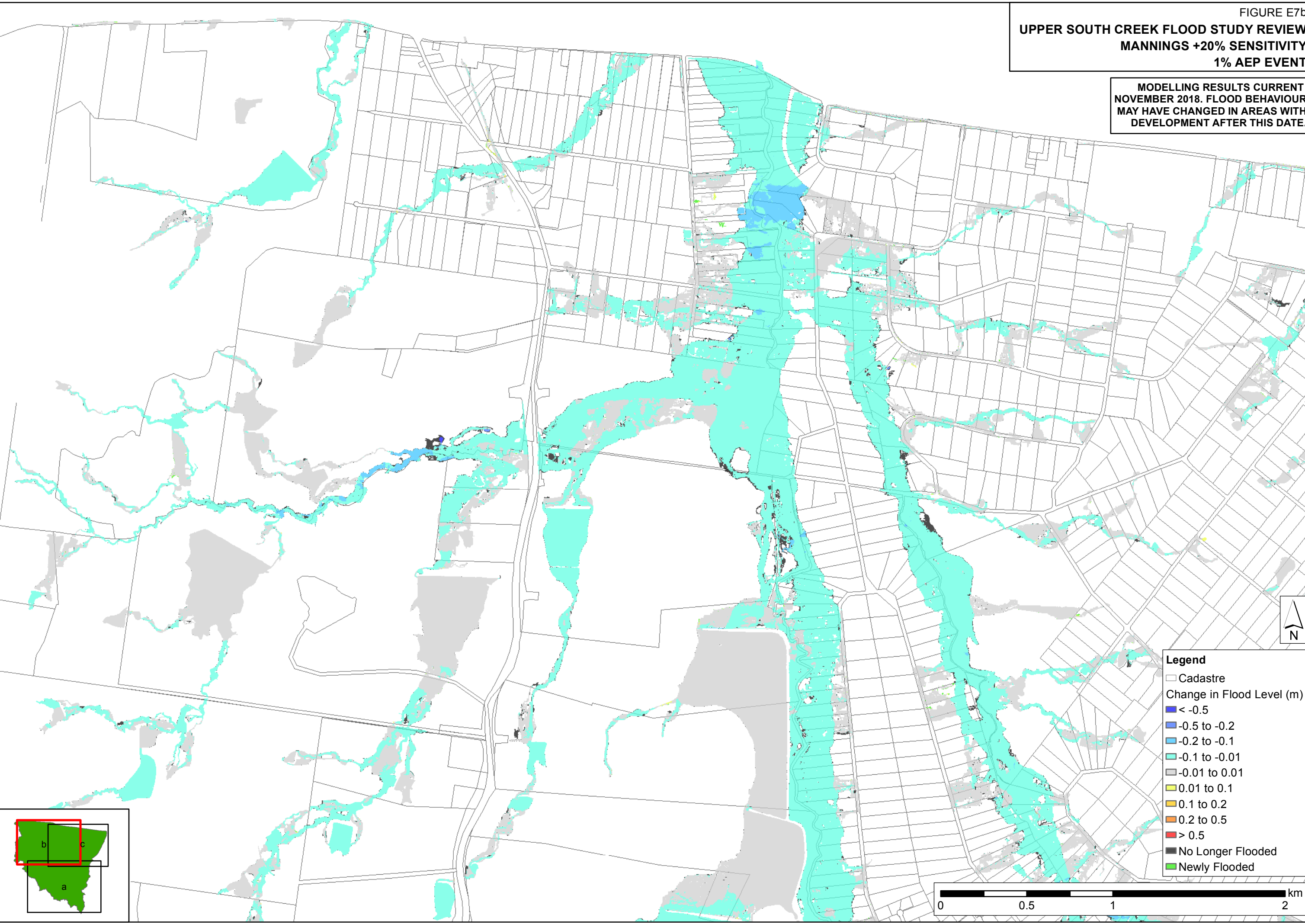
- Legend**
- Cadastre
  - Change in Flood Level (m)
    - < -0.5
    - 0.5 to -0.2
    - 0.2 to -0.1
    - 0.1 to -0.01
    - 0.01 to 0.01
    - 0.01 to 0.1
    - 0.1 to 0.2
    - 0.2 to 0.5
    - > 0.5
  - No Longer Flooded
  - Newly Flooded





UPPER SOUTH CREEK FLOOD STUDY REVIEW  
MANNINGS +20% SENSITIVITY  
1% AEP EVENT

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.



- Legend**
- Cadastre
  - Change in Flood Level (m)
    - < -0.5
    - 0.5 to -0.2
    - 0.2 to -0.1
    - 0.1 to -0.01
    - 0.01 to 0.01
    - 0.01 to 0.1
    - 0.1 to 0.2
    - 0.2 to 0.5
    - > 0.5
  - No Longer Flooded
  - Newly Flooded

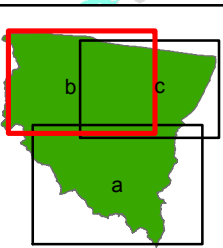
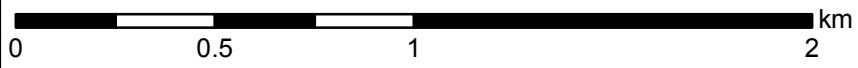
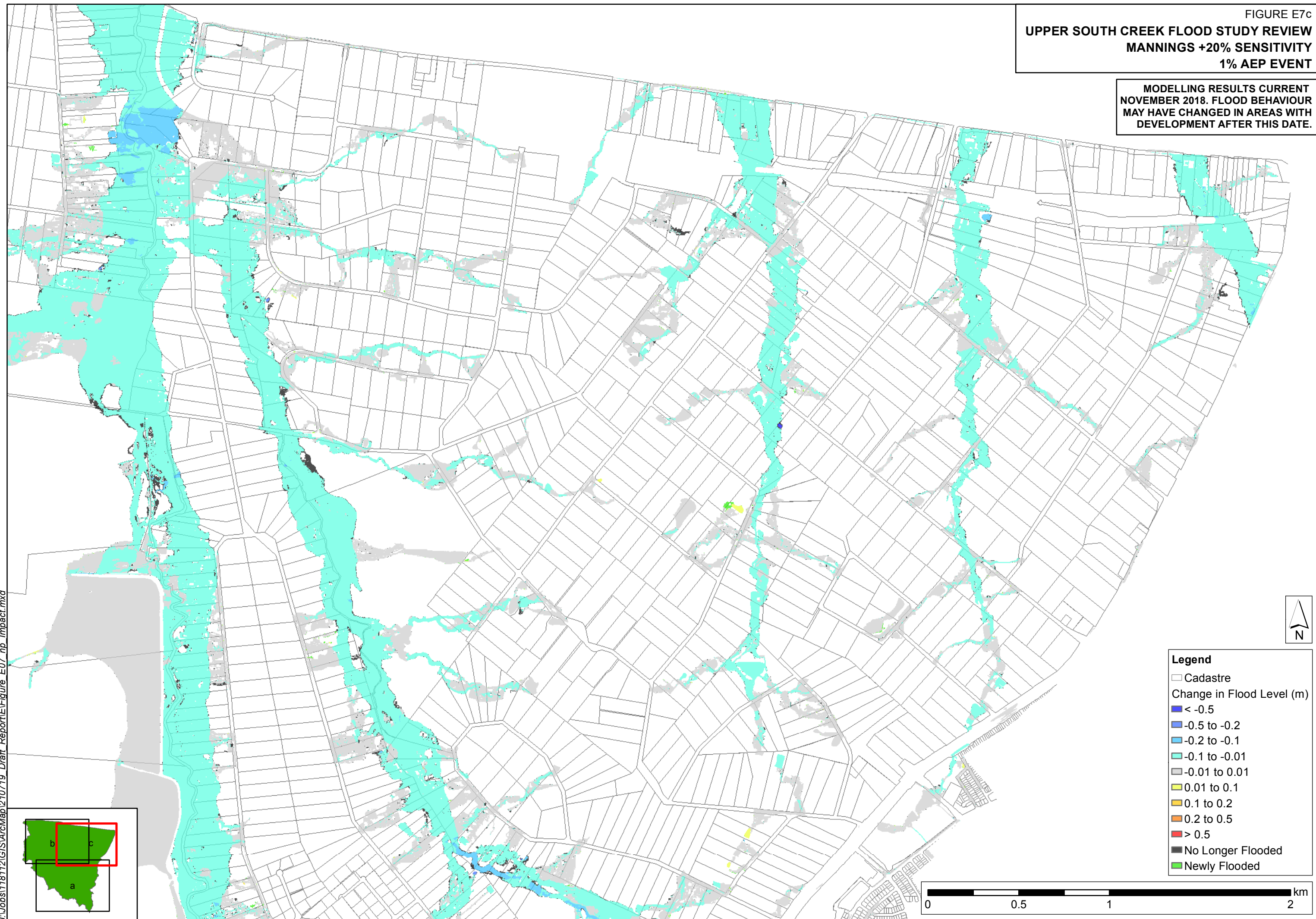


FIGURE E7c  
UPPER SOUTH CREEK FLOOD STUDY REVIEW  
MANNINGS +20% SENSITIVITY  
1% AEP EVENT

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.



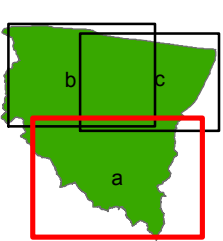
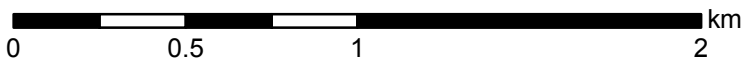


**UPPER SOUTH CREEK FLOOD STUDY REVIEW**  
**MANNINGS -20% SENSITIVITY**  
**1% AEP EVENT**

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.



- Legend**
- Cadastre
  - Change in Flood Level (m)
    - < -0.5
    - 0.5 to -0.2
    - 0.2 to -0.1
    - 0.1 to -0.01
    - 0.01 to 0.01
    - 0.01 to 0.1
    - 0.1 to 0.2
    - 0.2 to 0.5
    - > 0.5
  - No Longer Flooded
  - Newly Flooded





**UPPER SOUTH CREEK FLOOD STUDY REVIEW**  
**MANNINGS -20% SENSITIVITY**  
**1% AEP EVENT**

MODELLING RESULTS CURRENT  
 NOVEMBER 2018. FLOOD BEHAVIOUR  
 MAY HAVE CHANGED IN AREAS WITH  
 DEVELOPMENT AFTER THIS DATE.

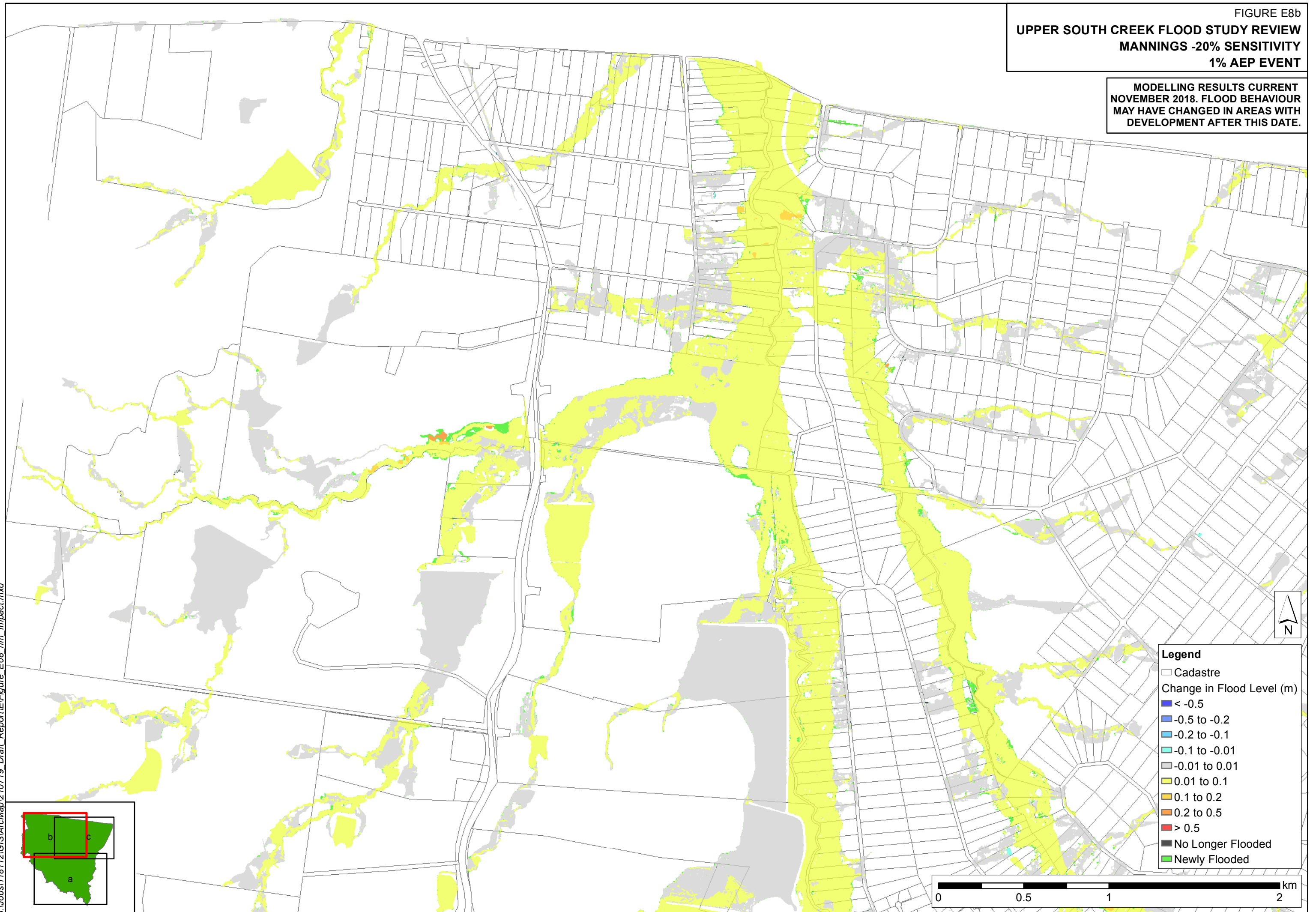




FIGURE E8c  
UPPER SOUTH CREEK FLOOD STUDY REVIEW  
MANNINGS -20% SENSITIVITY  
1% AEP EVENT

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.



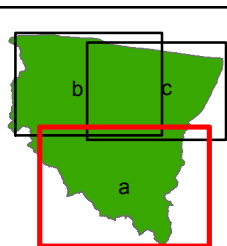
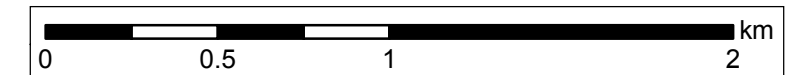


**UPPER SOUTH CREEK FLOOD STUDY REVIEW**  
**LOW BLOCKAGE SENSITIVITY**  
**1% AEP EVENT**

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.



- Legend**
- Cadastre
  - Change in Flood Level (m)
    - < -0.5
    - 0.5 to -0.2
    - 0.2 to -0.1
    - 0.1 to -0.01
    - 0.01 to 0.01
    - 0.01 to 0.1
    - 0.1 to 0.2
    - 0.2 to 0.5
    - > 0.5
  - No Longer Flooded
  - Newly Flooded





**UPPER SOUTH CREEK FLOOD STUDY REVIEW**  
**LOW BLOCKAGE SENSITIVITY**  
**1% AEP EVENT**

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.

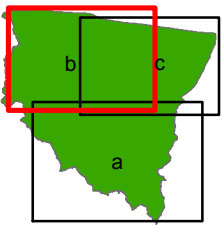
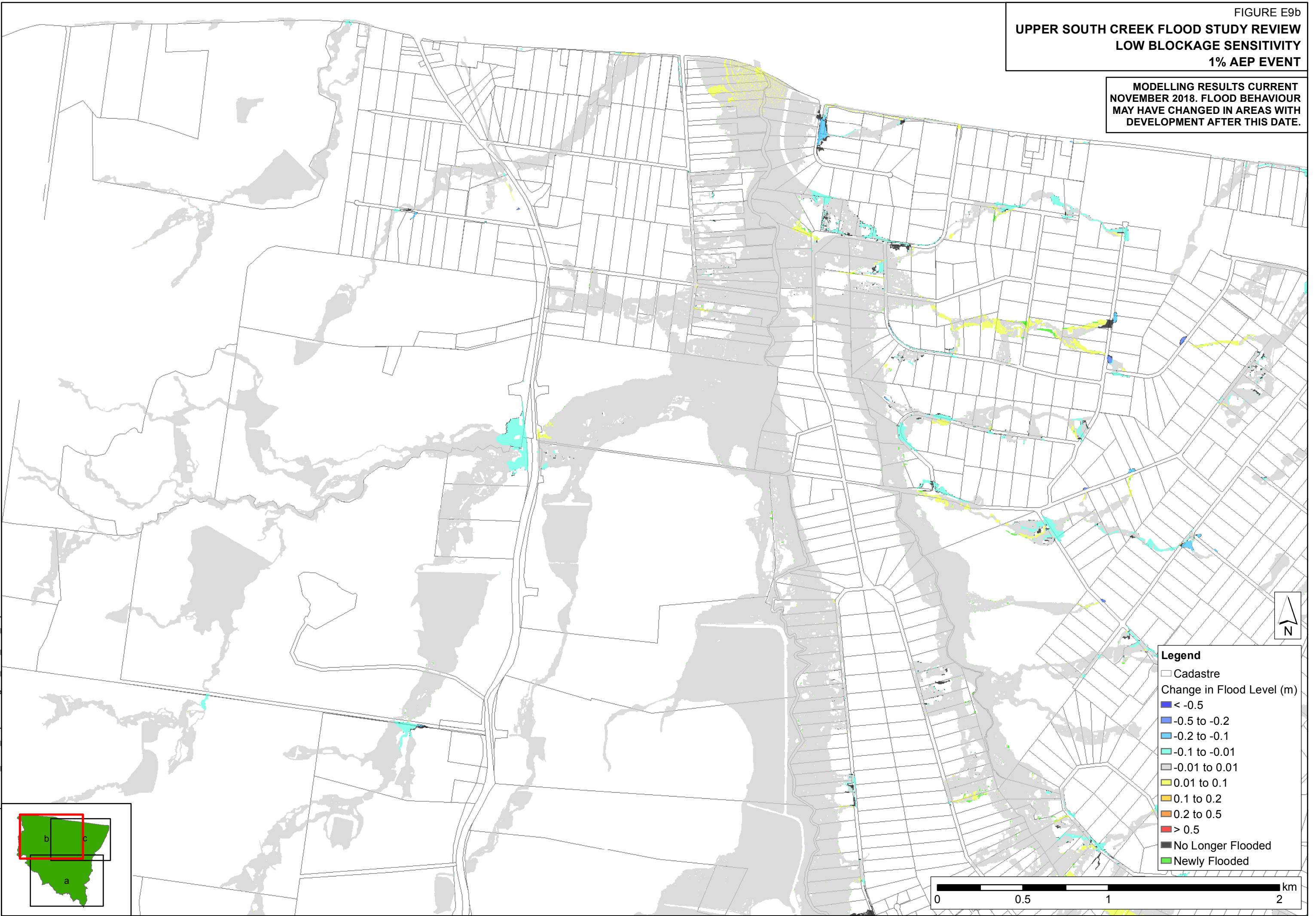


FIGURE E9c  
UPPER SOUTH CREEK FLOOD STUDY REVIEW  
LOW BLOCKAGE SENSITIVITY  
1% AEP EVENT

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.



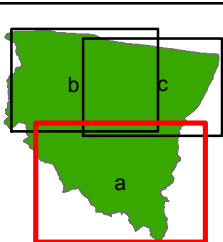
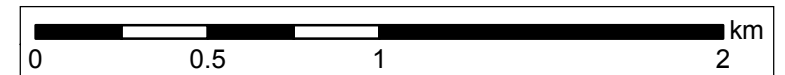


**UPPER SOUTH CREEK FLOOD STUDY REVIEW  
HIGH BLOCKAGE SENSITIVITY  
1% AEP EVENT**

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.



- Legend**
- Cadastre
  - Change in Flood Level (m)
  - < -0.5
  - -0.5 to -0.2
  - -0.2 to -0.1
  - -0.1 to -0.01
  - -0.01 to 0.01
  - 0.01 to 0.1
  - 0.1 to 0.2
  - 0.2 to 0.5
  - > 0.5
  - No Longer Flooded
  - Newly Flooded





**UPPER SOUTH CREEK FLOOD STUDY REVIEW  
HIGH BLOCKAGE SENSITIVITY  
1% AEP EVENT**

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.

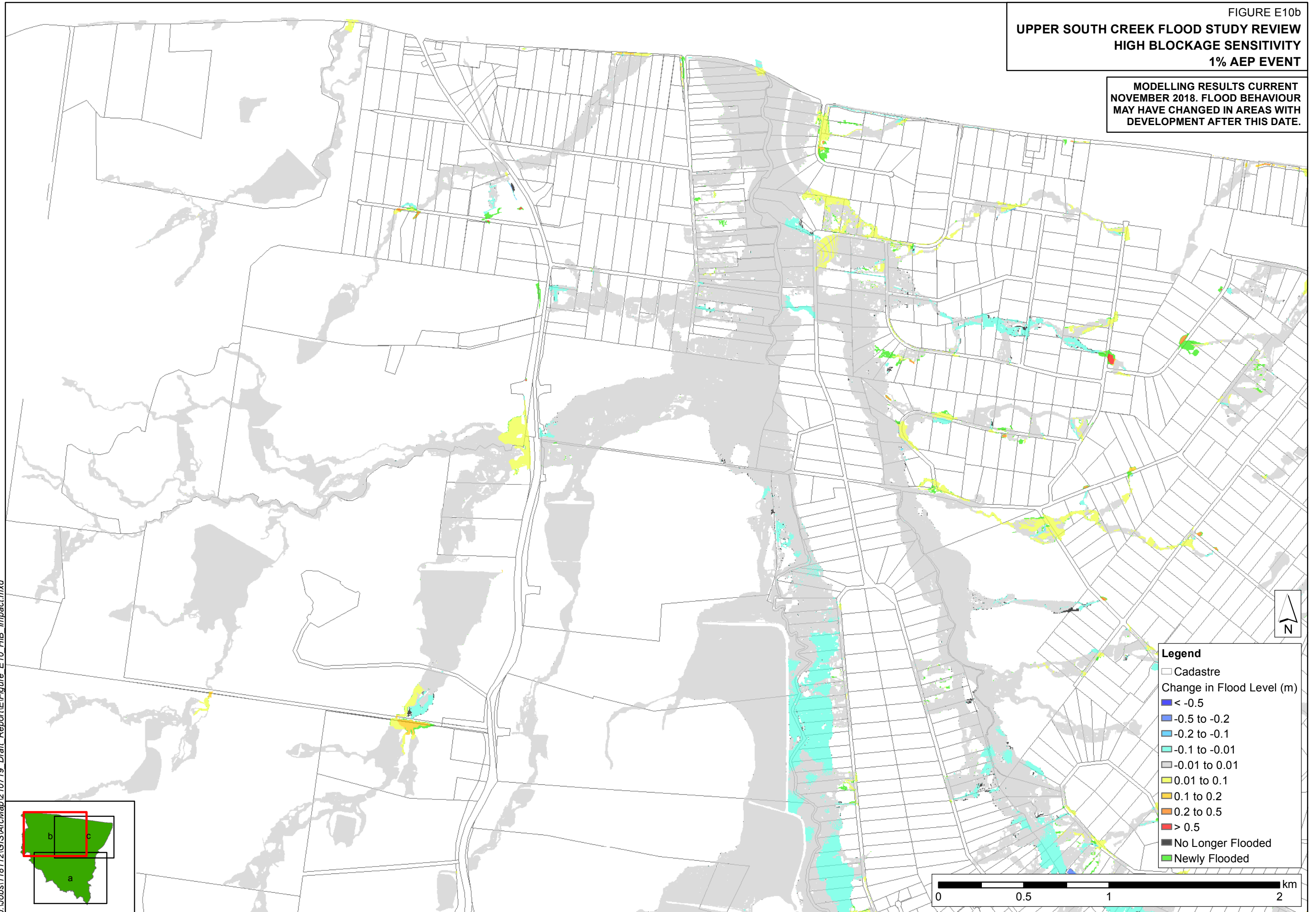


FIGURE E10c  
UPPER SOUTH CREEK FLOOD STUDY REVIEW  
HIGH BLOCKAGE SENSITIVITY  
1% AEP EVENT

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.

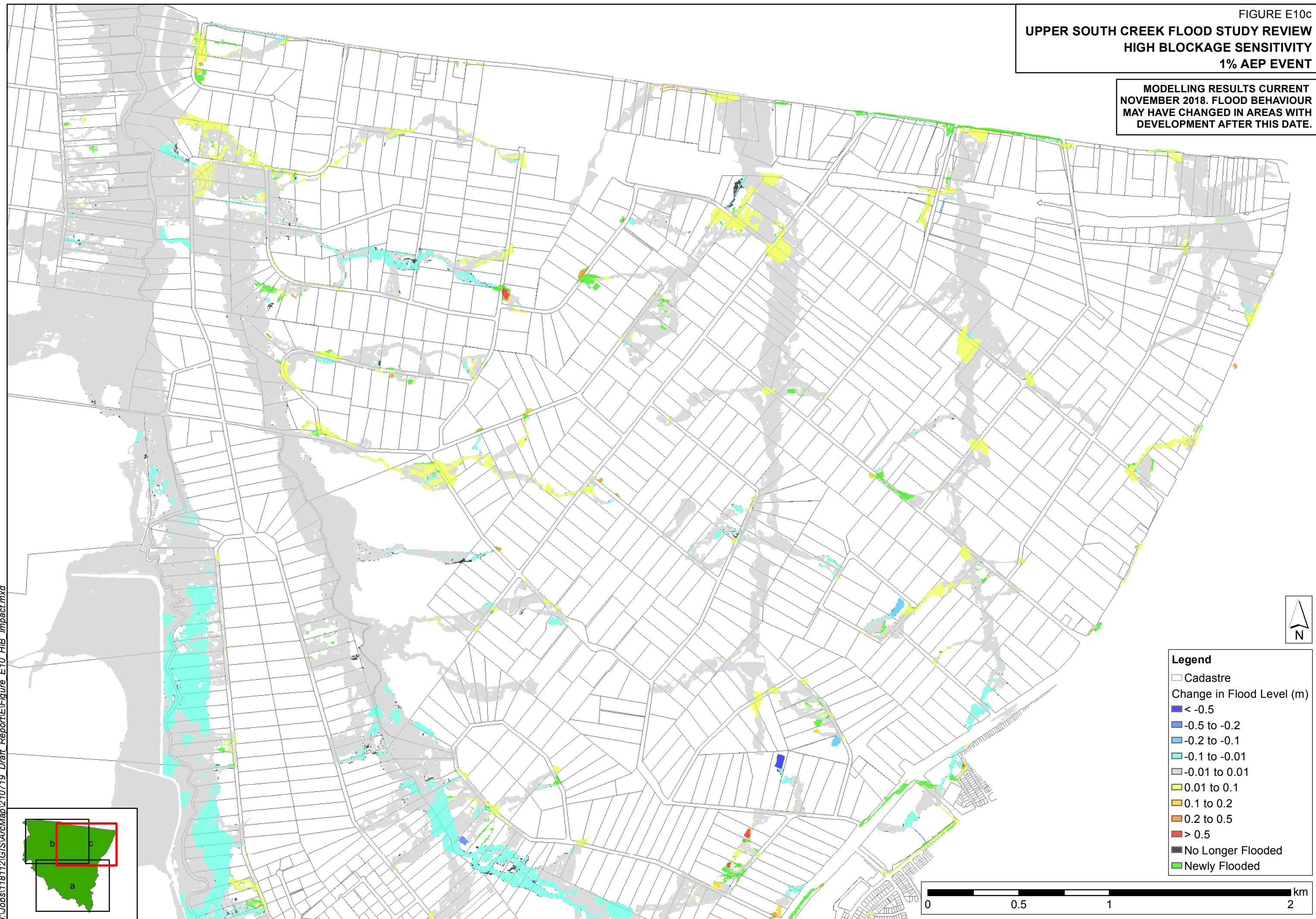




FIGURE E11a  
UPPER SOUTH CREEK FLOOD STUDY REVIEW  
FILLING OF FLOOD FRINGE IMPACT  
1% AEP EVENT

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.



- Legend**
- Cadastre
  - Change in Flood Level (m)
    - < -0.5
    - 0.5 to -0.2
    - 0.2 to -0.1
    - 0.1 to -0.01
    - 0.01 to 0.01
    - 0.01 to 0.1
    - 0.1 to 0.2
    - 0.2 to 0.5
    - > 0.5
  - No Longer Flooded
  - Newly Flooded

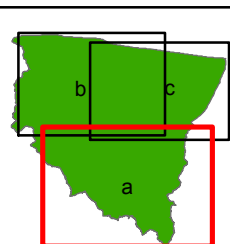
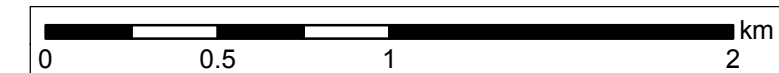
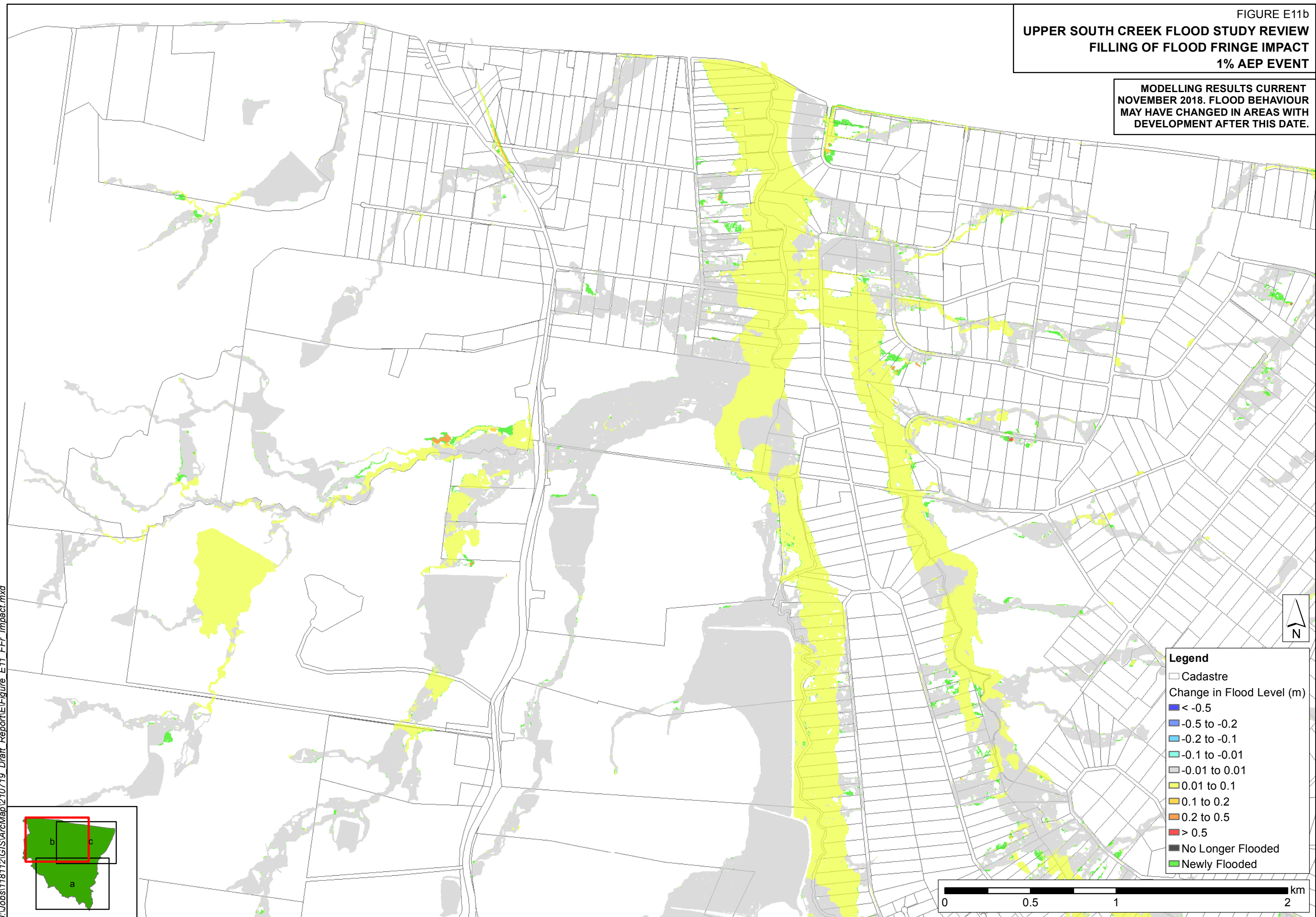


FIGURE E11b  
UPPER SOUTH CREEK FLOOD STUDY REVIEW  
FILLING OF FLOOD FRINGE IMPACT  
1% AEP EVENT

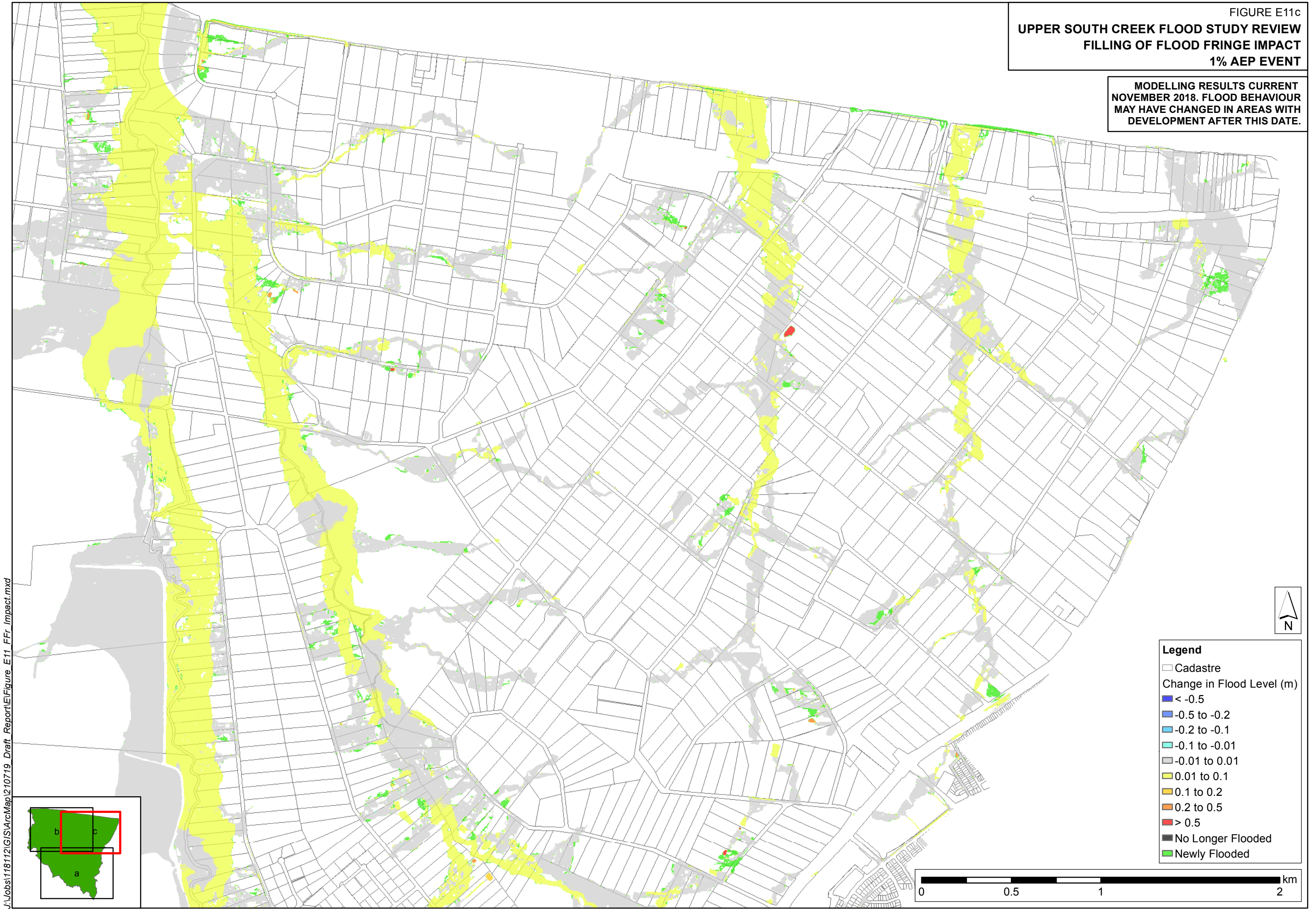
MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.





**UPPER SOUTH CREEK FLOOD STUDY REVIEW**  
**FILLING OF FLOOD FRINGE IMPACT**  
**1% AEP EVENT**

MODELLING RESULTS CURRENT  
 NOVEMBER 2018. FLOOD BEHAVIOUR  
 MAY HAVE CHANGED IN AREAS WITH  
 DEVELOPMENT AFTER THIS DATE.



**Legend**

- Cadastre
- Change in Flood Level (m)
- < -0.5
- -0.5 to -0.2
- -0.2 to -0.1
- -0.1 to -0.01
- -0.01 to 0.01
- 0.01 to 0.1
- 0.1 to 0.2
- 0.2 to 0.5
- > 0.5
- No Longer Flooded
- Newly Flooded

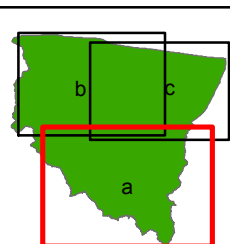
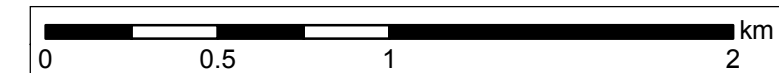


**UPPER SOUTH CREEK FLOOD STUDY REVIEW**  
**FILLING OF FLOOD FRINGE AND FLOOD STORAGE IMPACT**  
**1% AEP EVENT**

MODELLING RESULTS CURRENT  
 NOVEMBER 2018. FLOOD BEHAVIOUR  
 MAY HAVE CHANGED IN AREAS WITH  
 DEVELOPMENT AFTER THIS DATE.



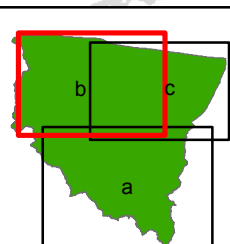
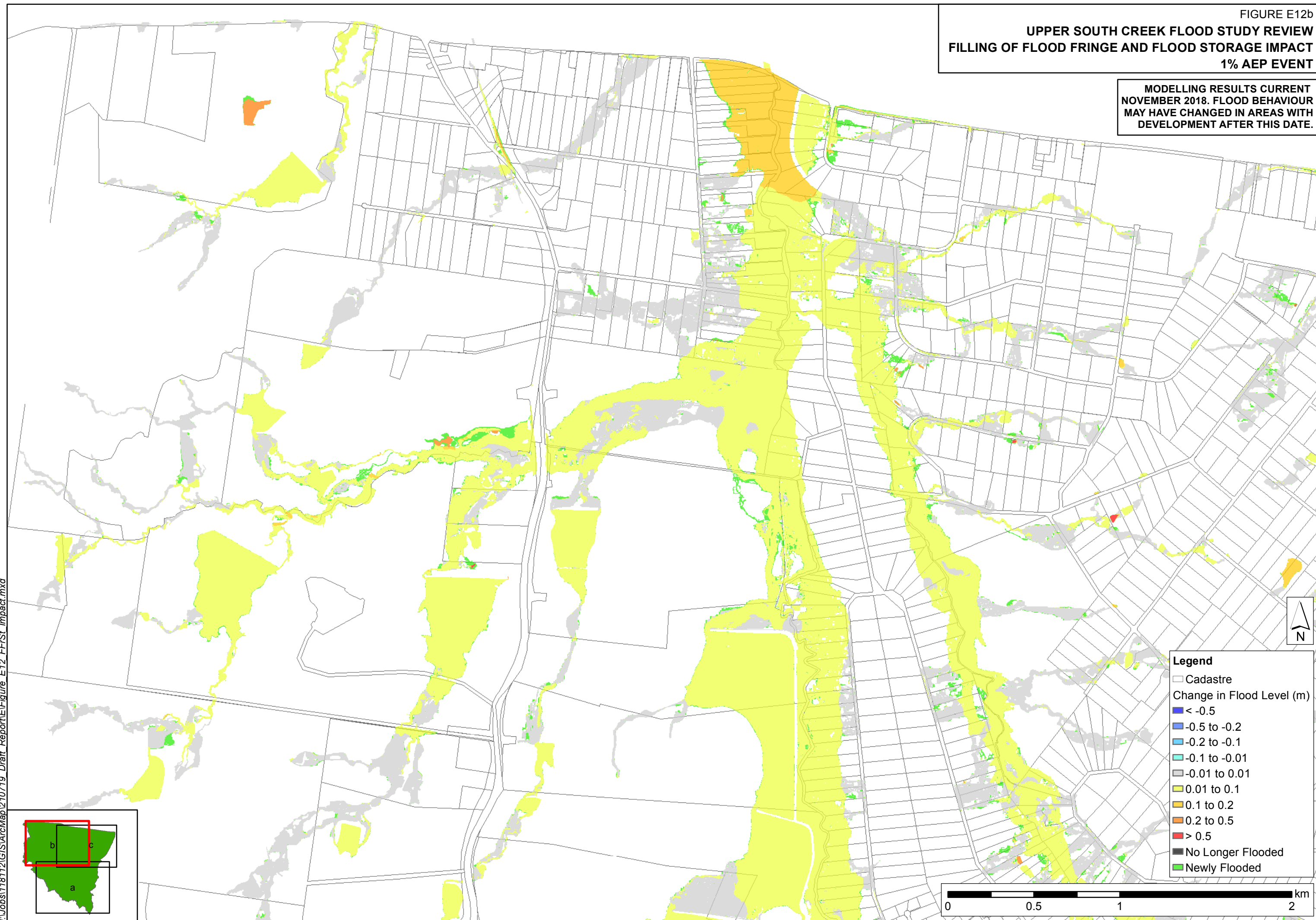
- Legend**
- Cadastre
  - Change in Flood Level (m)
  - < -0.5
  - -0.5 to -0.2
  - -0.2 to -0.1
  - -0.1 to -0.01
  - -0.01 to 0.01
  - 0.01 to 0.1
  - 0.1 to 0.2
  - 0.2 to 0.5
  - > 0.5
  - No Longer Flooded
  - Newly Flooded





**UPPER SOUTH CREEK FLOOD STUDY REVIEW**  
**FILLING OF FLOOD FRINGE AND FLOOD STORAGE IMPACT**  
**1% AEP EVENT**

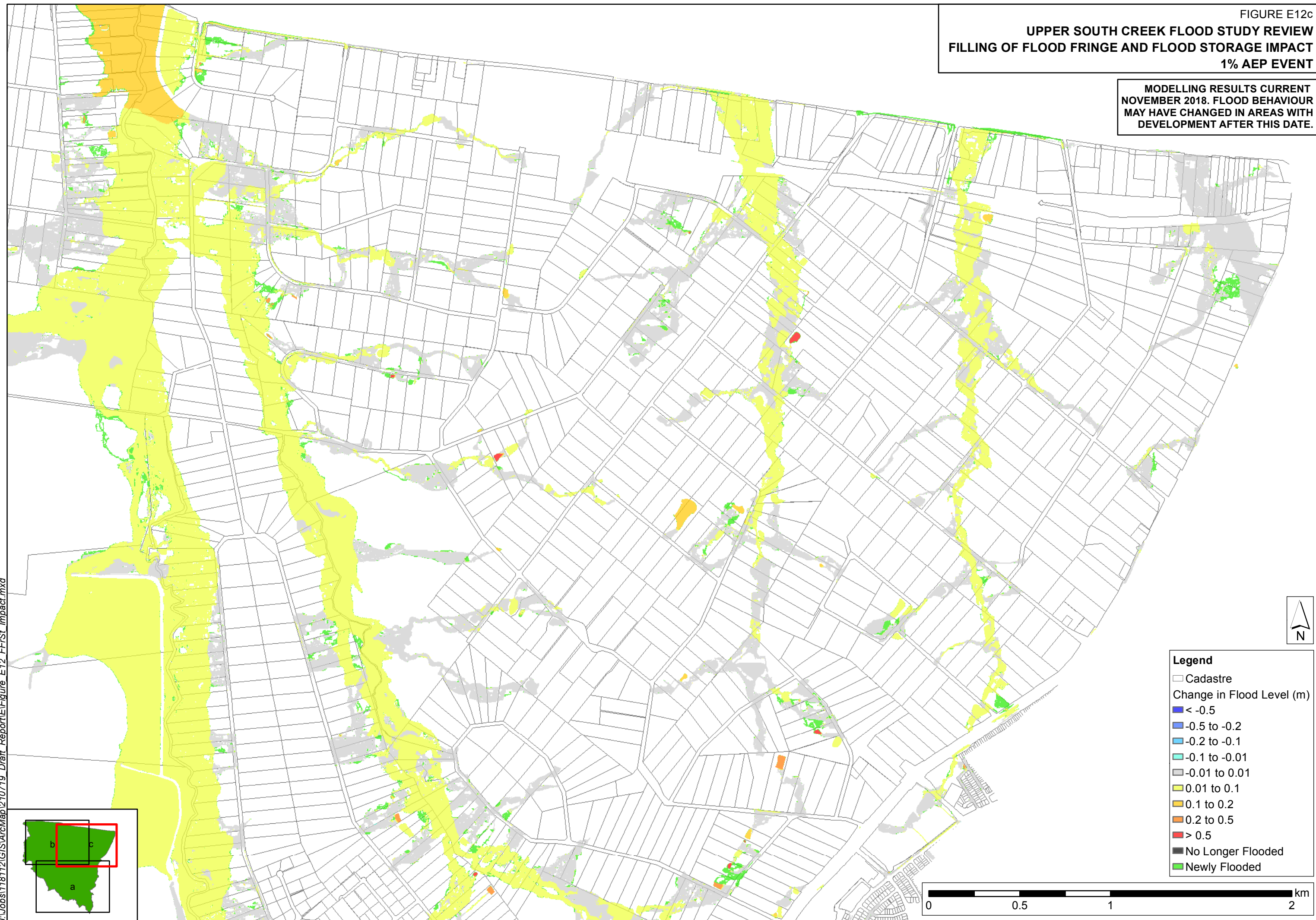
MODELLING RESULTS CURRENT  
 NOVEMBER 2018. FLOOD BEHAVIOUR  
 MAY HAVE CHANGED IN AREAS WITH  
 DEVELOPMENT AFTER THIS DATE.





**UPPER SOUTH CREEK FLOOD STUDY REVIEW**  
**FILLING OF FLOOD FRINGE AND FLOOD STORAGE IMPACT**  
**1% AEP EVENT**

MODELLING RESULTS CURRENT  
 NOVEMBER 2018. FLOOD BEHAVIOUR  
 MAY HAVE CHANGED IN AREAS WITH  
 DEVELOPMENT AFTER THIS DATE.





J:\Jobs\118112\GIS\ArcMap\210719 Draft\_Report\Figure E13\_05pc\_FSUP-16\_FSUP-87\_Impact.mxd

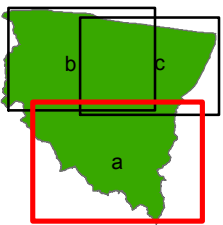
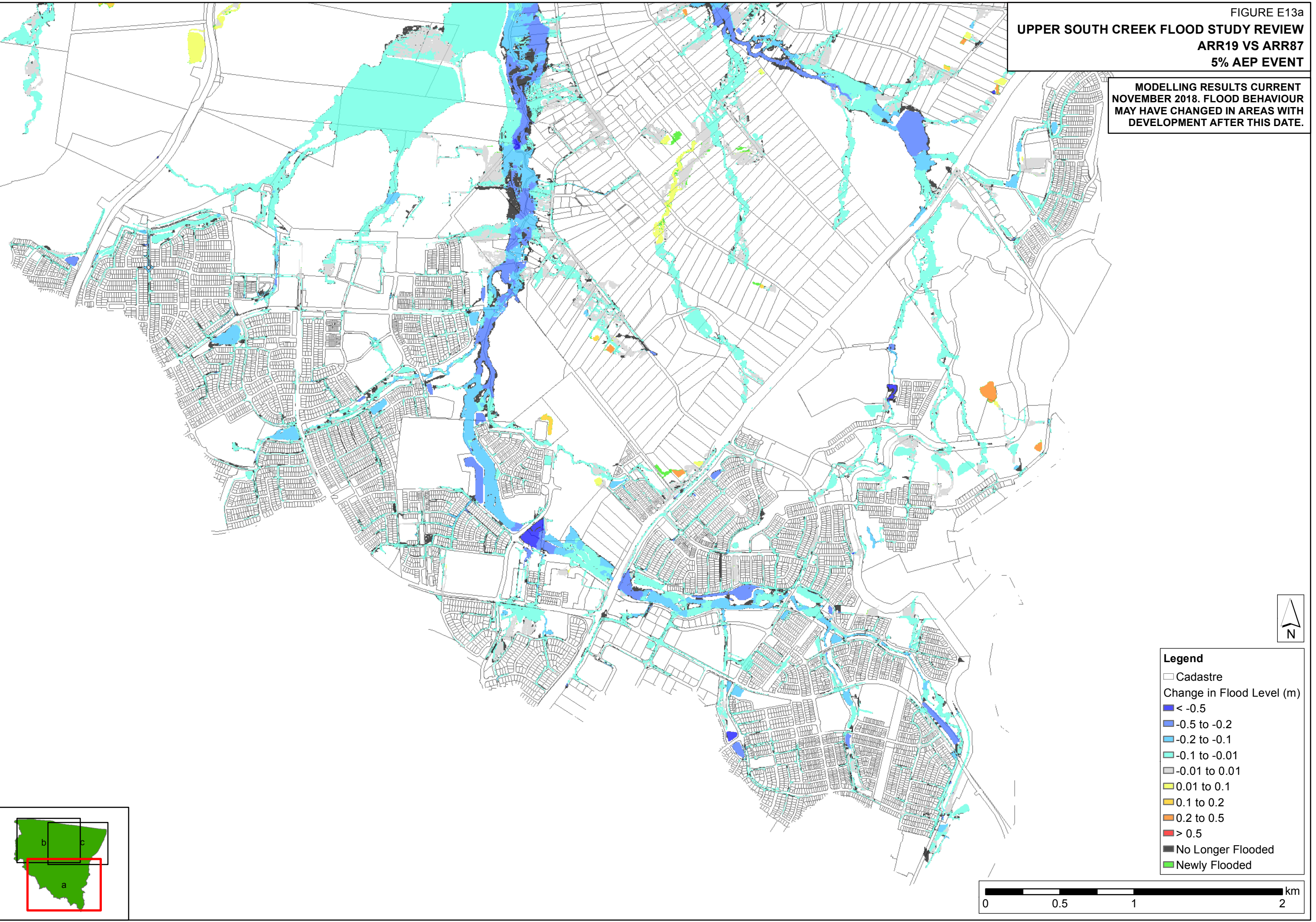




FIGURE E13b  
UPPER SOUTH CREEK FLOOD STUDY REVIEW  
ARR19 VS ARR87  
5% AEP EVENT

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.

J:\Jobs\118112\GIS\ArcMap\210719 Draft\_Report\Figure E13 05pc\_FSUP-16\_FSUP-87\_Impact.mxd

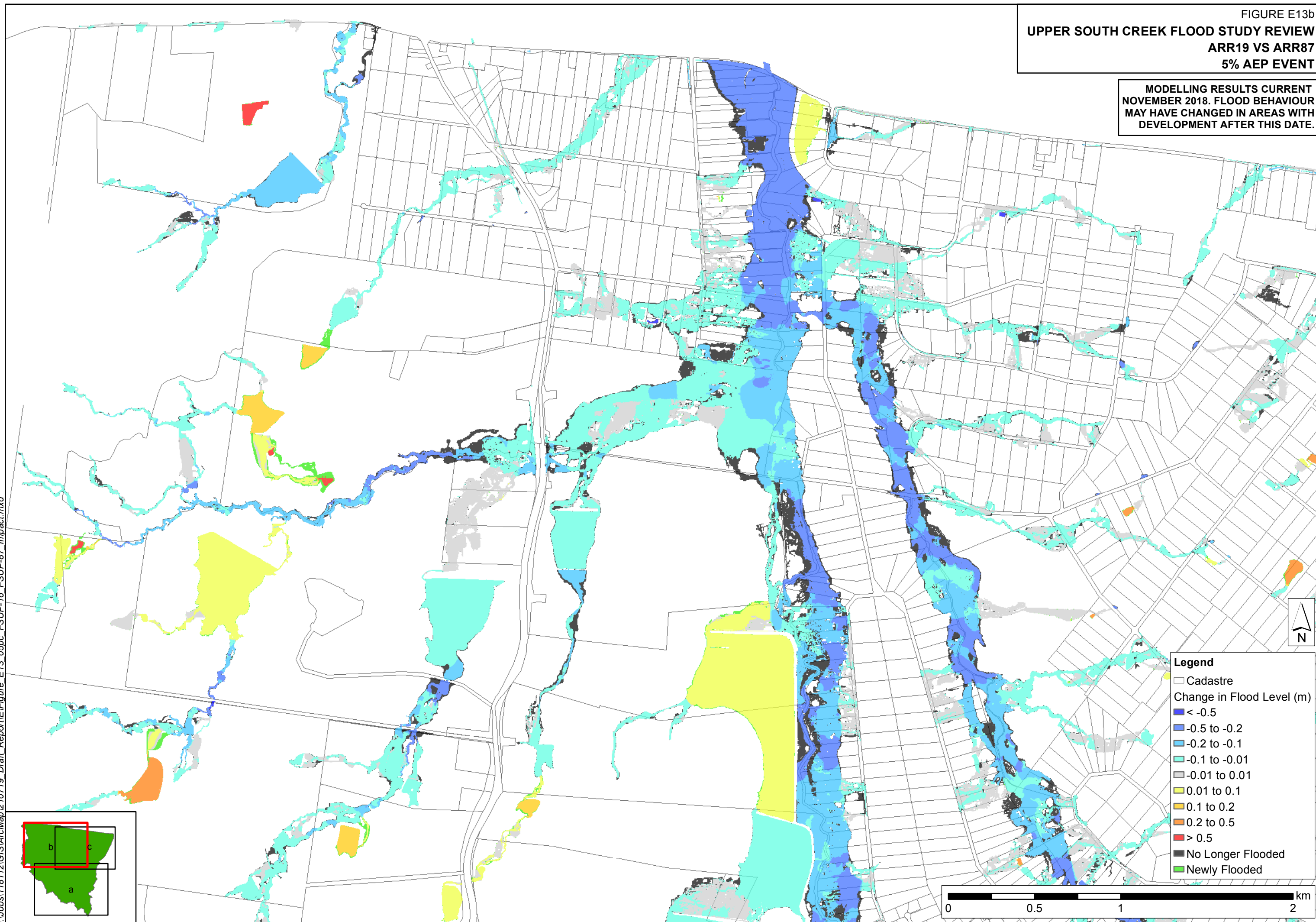
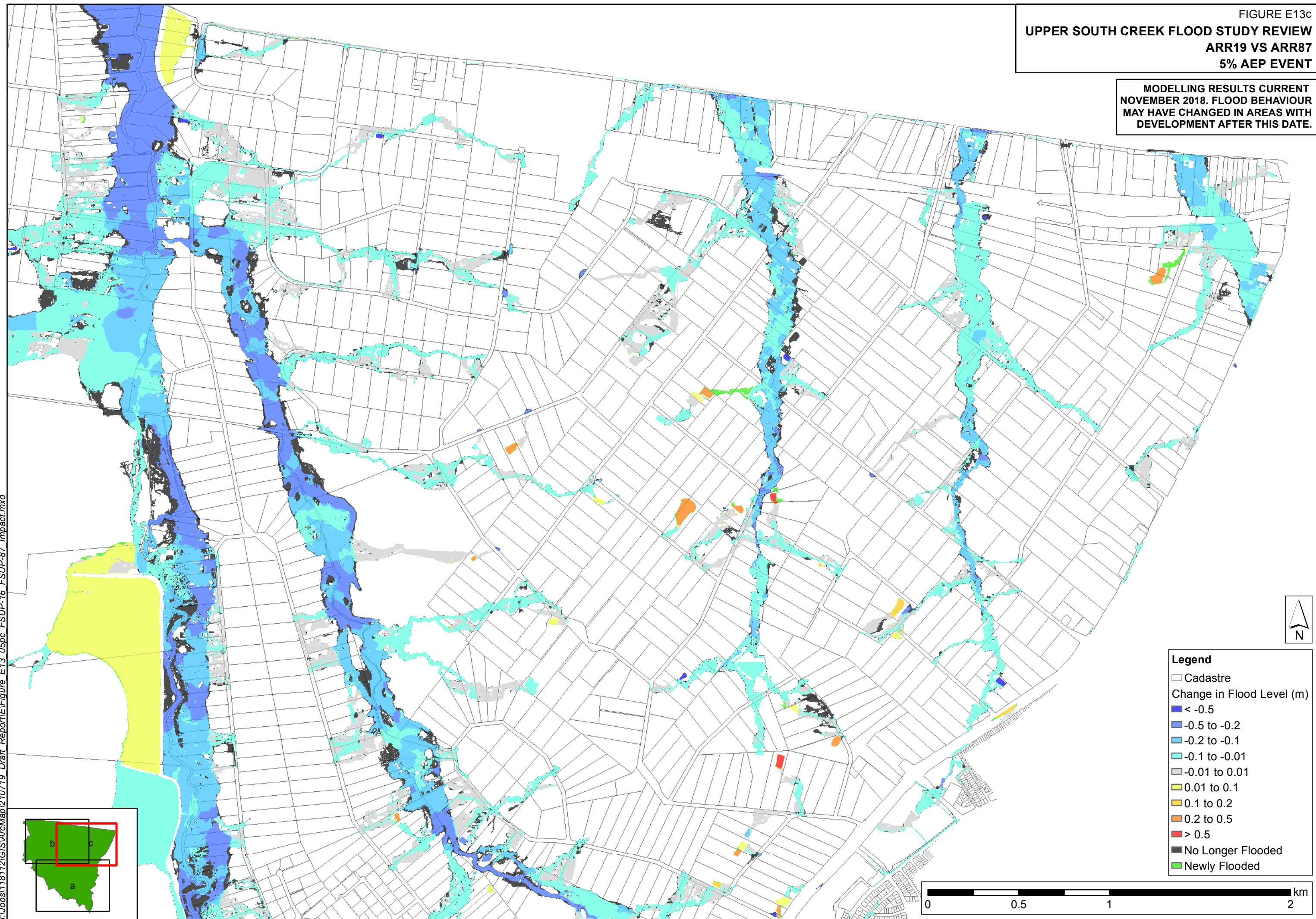




FIGURE E13c  
UPPER SOUTH CREEK FLOOD STUDY REVIEW  
ARR19 VS ARR87  
5% AEP EVENT

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.





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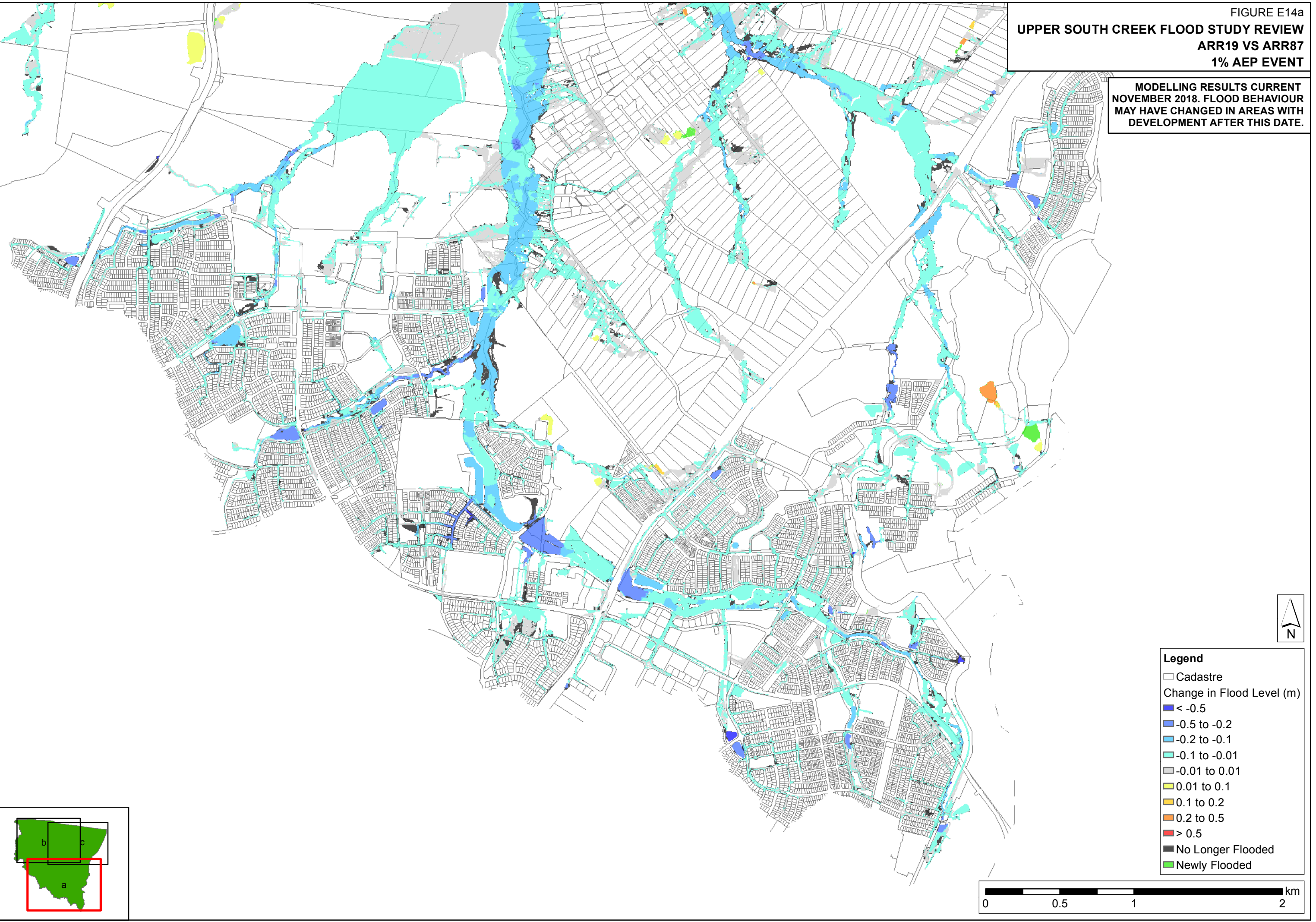




FIGURE E14b  
UPPER SOUTH CREEK FLOOD STUDY REVIEW  
ARR19 VS ARR87  
1% AEP EVENT

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.

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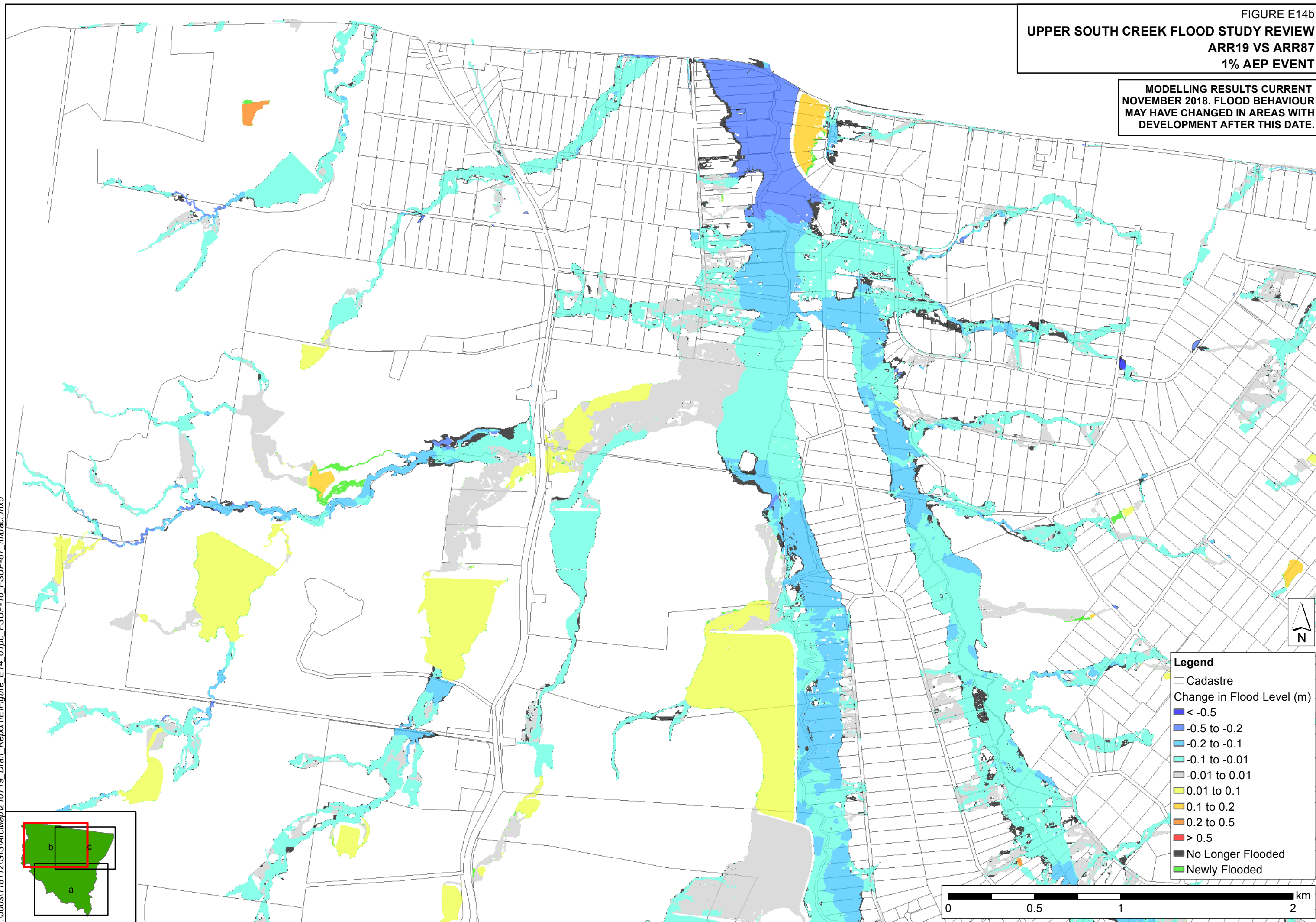




FIGURE E14c  
UPPER SOUTH CREEK FLOOD STUDY REVIEW  
ARR19 VS ARR87  
1% AEP EVENT

MODELLING RESULTS CURRENT  
NOVEMBER 2018. FLOOD BEHAVIOUR  
MAY HAVE CHANGED IN AREAS WITH  
DEVELOPMENT AFTER THIS DATE.

