

# Stonehaven Bay Coastal Flood Protection Study

**JBA Consulting**

**29 January 2019**

# Introduction



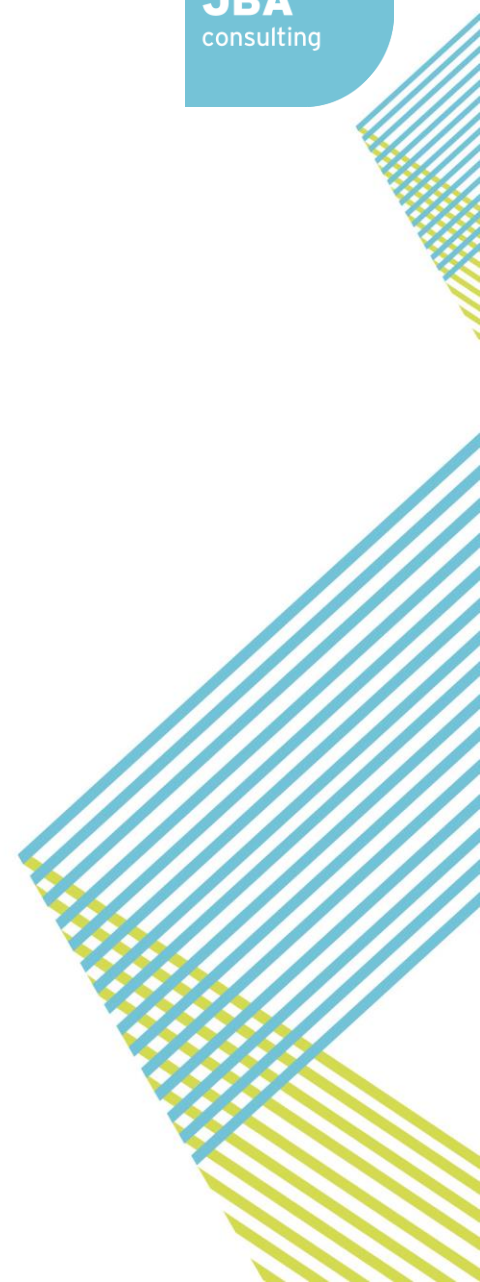
# Project timeline

---

Information review report	Complete
Topographic and structural surveys	Complete
Baseline ecology/environmental, geotechnical, natural flood management, river basin management plan, landscape and built heritage studies	Complete
Flood and erosion modelling with baseline economic analysis	Presented today
Public engagement – long list of options and multi-criteria analysis	Presented today
Short list of options	Winter 2019
Options appraisal	Winter/Spring 2019
Public engagement – preferred option	Spring/Summer 2019

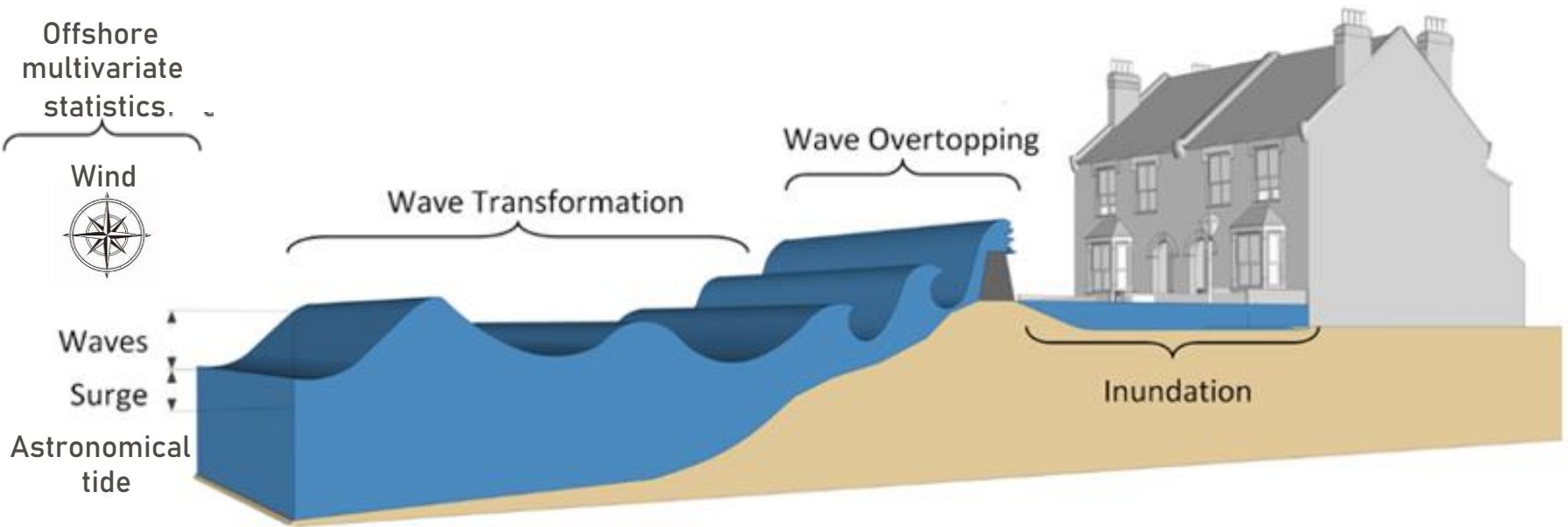
---

# Flood modelling





# Flood modelling

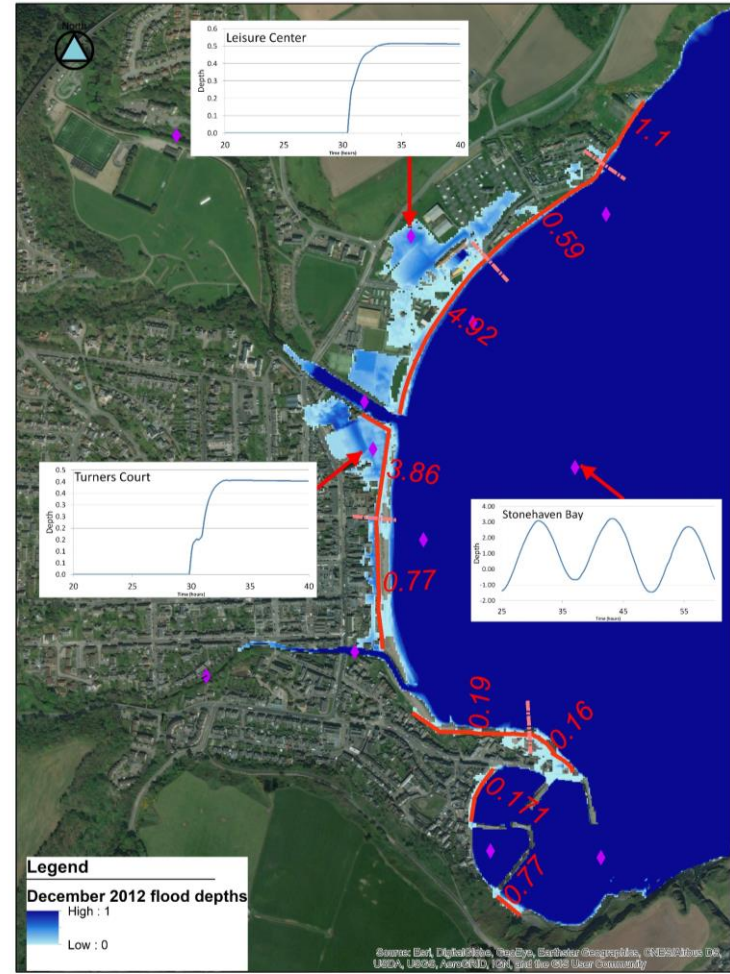


# December 2012 event



250 125 0 250 Meters

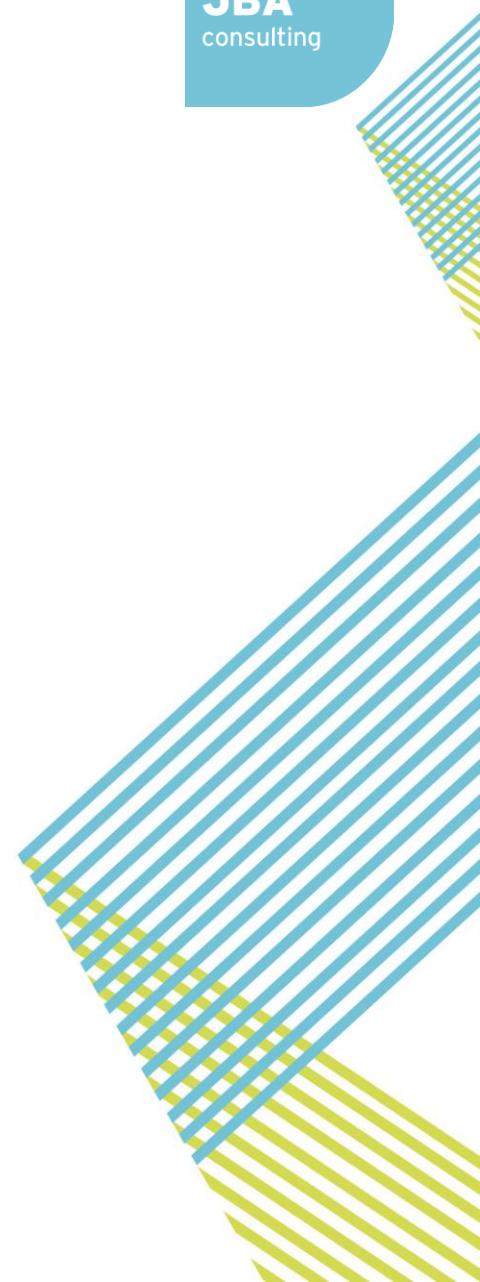
Contains OS data © Crown copyright and database right 2018



290 145 0 290 Meters

Contains OS data © Crown copyright and database right 2018

# Baseline economic assessment





# Baseline economic assessment

- SEPA's receptor database property points
- Water depths from inundation modelling
- Depth-damage curves from Multi-Coloured Manual (MCM) for wave action water
- Building threshold levels
- Direct/indirect and tangible/intangible damages



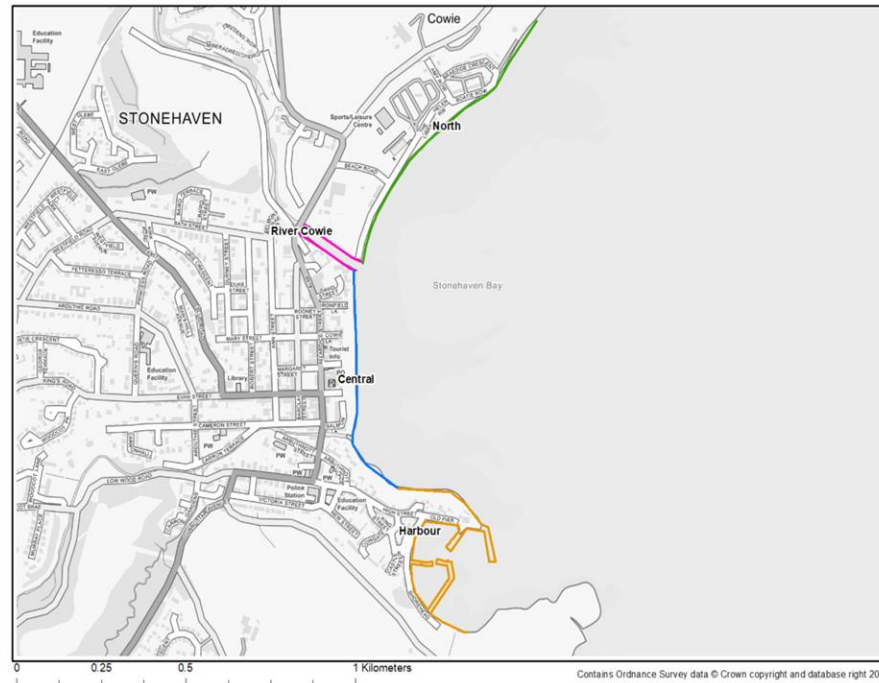


# Long list



# What is the 'long list'?

- List of all the options being considered to reduce coastal risk in Stonehaven and Cowie
- 21 options
- 3 benefit zones; north, central and harbour, plus tidal reach of Cowie



# How will the long list be assessed?

Category	Assessment criteria	Aims
Technical	<b>Technical performance and adaptability</b>	Provides desired standard of protection throughout the design life of the scheme or is easily adaptable to allow for modifications for climate change through time. Provides protection to full extent of benefit zone.
	<b>Buildability</b>	Safe to construct, local sources of appropriate material for construction, suitable ground conditions and would not conflict with existing services, primarily the sewer main along the front.
Economic	<b>Capital cost</b>	Low capital cost.
	<b>Maintenance and monitoring</b>	Minimal ongoing maintenance and/or monitoring requirements and costs.
Environmental	<b>Ecology and environment</b>	No environmental impact on local habitats, geology and ecology, including local designations.
	<b>NFM and RBMP</b>	Works with nature to provide natural protection and does not downgrade the existing classifications.
Social	<b>Landscape and Heritage</b>	Works with the existing landscape and is sensitive to listed buildings and heritage designations.
	<b>Tourism</b>	Maintains access to beaches, considers local views and provides connectivity along the frontage.
Political	<b>Strategic alignment</b>	Aligns with local strategies.
	<b>Stakeholder views</b>	Supported by stakeholders and the local community.
Legal	<b>Waste management and contamination</b>	Minimal waste disposal requirements or contamination risks.
	<b>Regulatory consenting and approvals</b>	Regulatory framework would be readily achievable.



# This evening

---

- Posters – at back of room
    - Flood extents
    - Long list options for each benefit zone
  - Booklets
  - Feedback forms
  
  - JBA Consulting
    - Nicci Buckley
    - Douglas Pender
  - Aberdeenshire Council
-