

The costs and impacts of the winter 2013 to 2014 floods

SC140025 Annex 1 – Method Statements

Section 5 Residential Properties

National

Number of residential properties affected:
8,342

Select best estimate of damages
Based on source, robustness of data, clearly economic (or financial)

Estimated damages:
£276,000,000
ABI data for 23 December 2013 to 28 February 2014

Adjustments and revisions required to obtain BEST economic estimate of damages

Estimated damages for coastal surge (early December 2013) using extrapolation based on insurance claim per residential property (impacted by fluvial/groundwater flooding)

Extrapolation using average insurance claim per property during the period 23 December 2013 to 28 February 2014 of £23,000

where financial damage estimate used

Remove VAT (at 20%) from financial estimates

Adjust for 75% of damages covered by inventory items

Adjust for residual life (assume 50% depreciation)

Adjust for 25% of damages covered by non-inventory items

Adjusted figure:
£140,000,000
Average claim based on 6,296 properties flooded (fluvial/groundwater): £23,000

Coastal flood damages:
£95,000,000
Average claim based on 4,169 properties flooded (coastal) and £23,000 per claim

Total claims (fluvial, groundwater & coastal):
£240,000,000

Adjust for under-insurance, assumed 25% for households

An average percentage of under-insurance is used for England and Wales as a whole, with no specific data found for individual locations

National estimate (to 2 significant figures):
£320,000,000
Economic damage estimate for fluvial, groundwater and coastal floods based on adjusted claims data

Overall best estimate:
£320,000,000

Local

Duration of flooding

Type of flood (coastal, fluvial, pluvial, groundwater)

Number of residential properties affected:
10,465 (for 72 LLFAs)
*Fluvial/Groundwater: 6,296
Coastal: 4,169*

Select best estimate of damages
Where more than one figure available, based on source and robustness of data

Not taken forward as the best estimate

Estimated damages as £ Limited data (for 7 LLFAs)

Government funding for repairs as £ (grants, etc.) Moderate/good data - repair and renew grant (for 42 LLFAs)

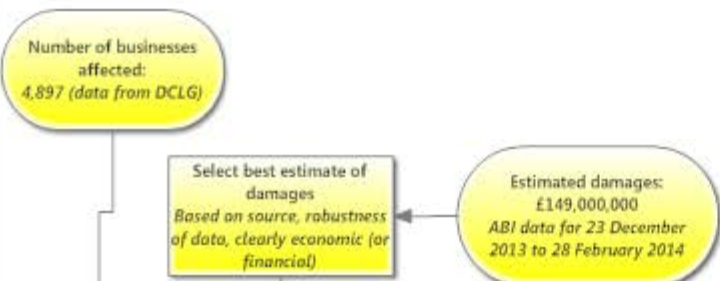
Assumptions

Data

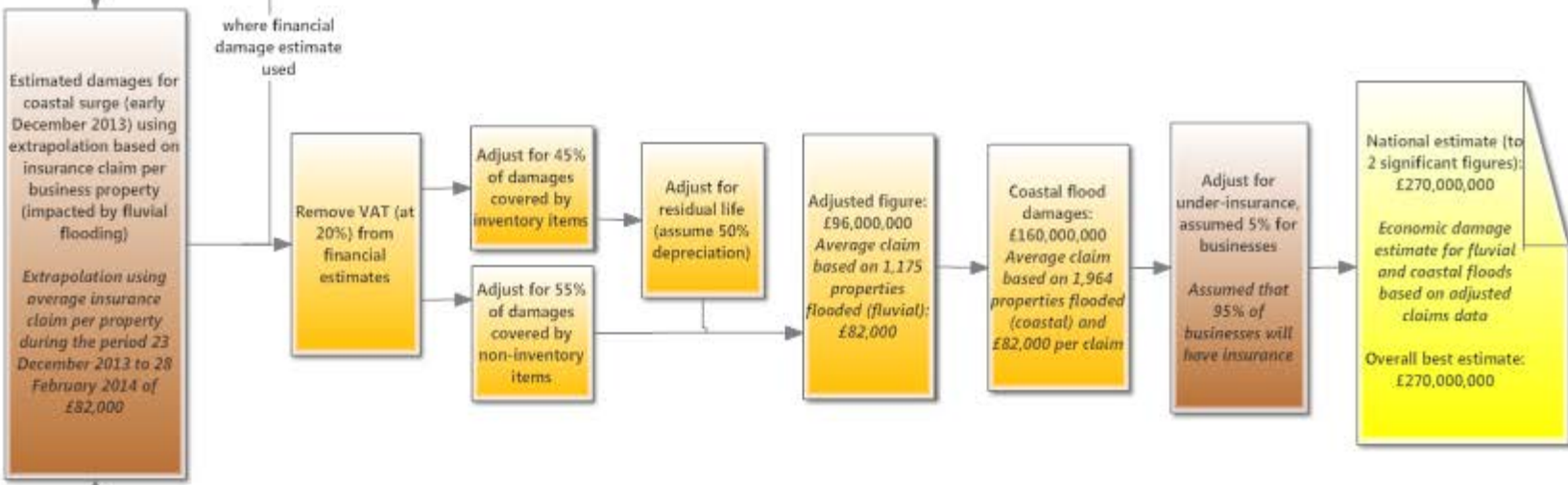
Uncertainty Rating	
Low	
Low-moderate	
Moderate	
Moderate-high	
High	

Section 6 Businesses

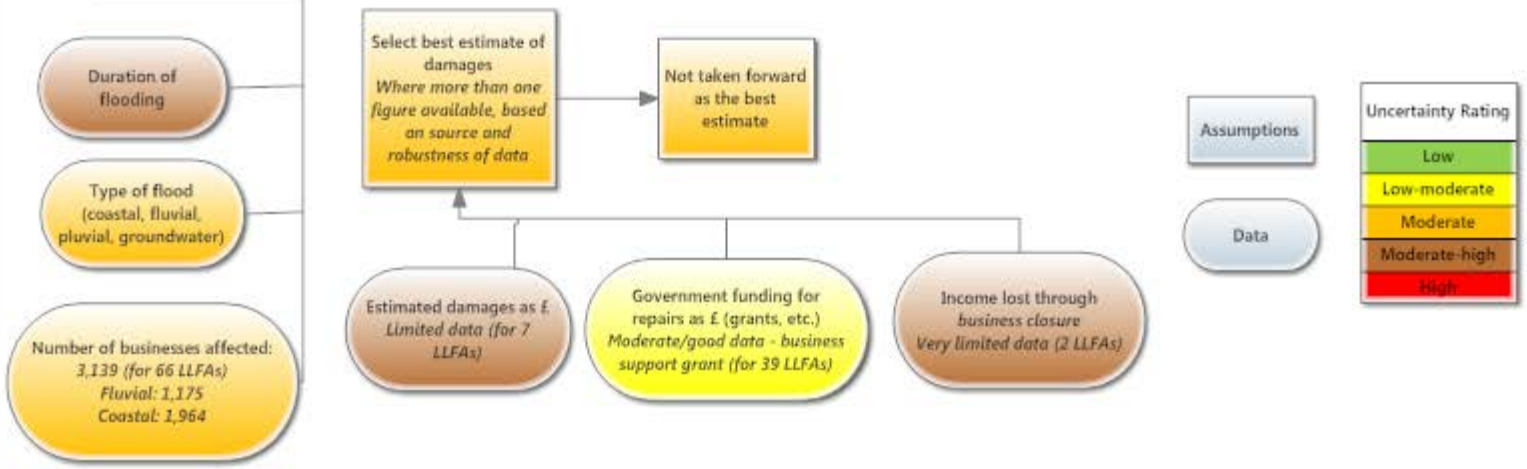
National



Adjustments and revisions required to obtain BEST economic estimate of damages



Local

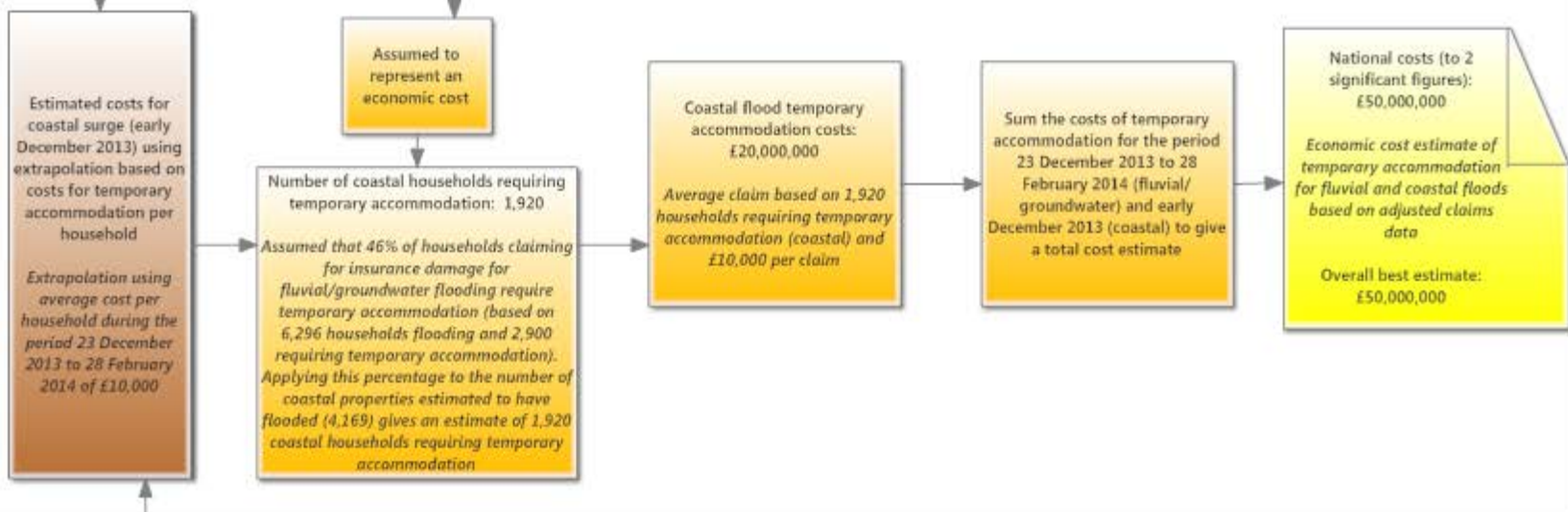


Section 7 Temporary accommodation

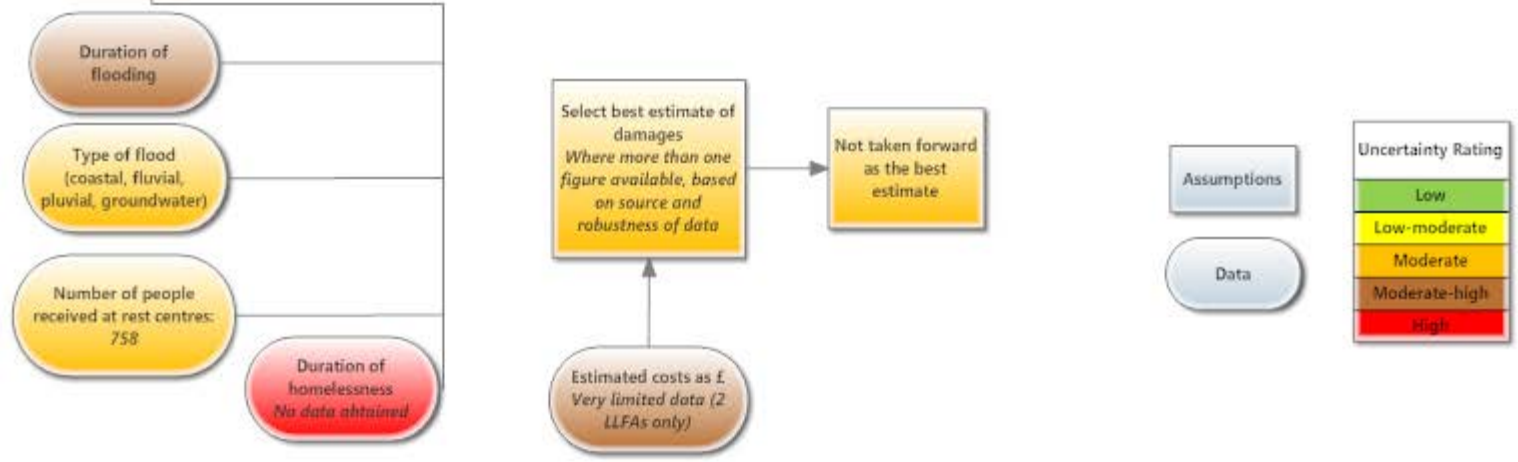
National



Adjustments and revisions required to obtain BEST economic estimate of damages



Local



Section 8

Motor vehicles, boats and caravans

National

Number of insurance claims for vehicles:
5,400 (ABI data for 23 December 2013 to 28 February 2014 - mainly fluvial/groundwater flooding)
8,976 (extrapolation of ABI data to include fluvial/groundwater and coastal flooding)

Select best estimate of damages
Based on source, robustness of data, clearly economic (or financial)

Estimated damages:
£22,000,000
ABI data for 23 December 2013 to 28 February 2014

Adjustments and revisions required to obtain BEST economic estimate of damages

Estimated damages for coastal surge (early December 2013) using extrapolation based on the proportion of residential properties impacted by fluvial/groundwater flooding (impacts during the period 23 December 2013 to 28 February 2014) and coastal flooding.

Extrapolation using the proportion of residential properties impacted by fluvial/groundwater flooding (60%) and coastal flooding (40%) (assumed to apply to vehicles damaged by flooding)

Assumed to represent an economic cost

Estimated damages to vehicles:
£22,000,000
Refers to insurance claims between the period 23 December 2013 and 28 February 2014 (mainly fluvial/groundwater flooding)

Estimate of the number of vehicles impacted by coastal flooding:
3,576
Total no. of vehicles impacted (8,976 impacted by fluvial/groundwater and coastal flooding) minus the no. of vehicles impacted by fluvial/groundwater flooding only (5,400)

Estimated average damage cost per vehicle:
£4,100
ABI data suggests that there were 5,400 vehicle claims totalling £22 million

Estimated damages to vehicles impacted by coastal flooding:
£15,000,000
Based on 3,576 vehicles impacted by coastal flooding and an average damage cost of £4,100 per vehicle

Adjust for under-insurance, assumed 0% for vehicles
Assumed that 100% of vehicle owners will have insurance

Sum of damages to vehicles impacted by fluvial/groundwater and coastal flooding

National damages (to 2 significant figures):
£37,000,000

Economic damage estimate for fluvial/groundwater floods (based on claims data) and extrapolated to include coastal floods

Overall best estimate:
£37,000,000

Local

- Duration of flooding
- Type of flood (coastal, fluvial, pluvial, groundwater)
- Number of vehicles affected: 738 (for 13 LLFAs)

Select best estimate of damages
Where more than one figure available, based on source and robustness of data

Estimated damages as £. Very limited data (for 1 LLFA)

Not taken forward as the best estimate

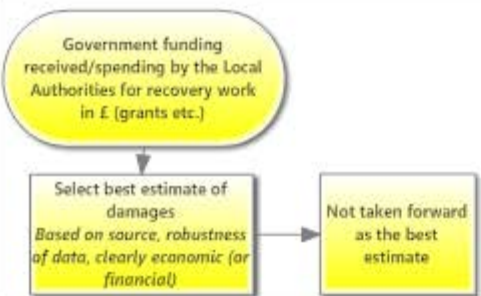
Assumptions

Data

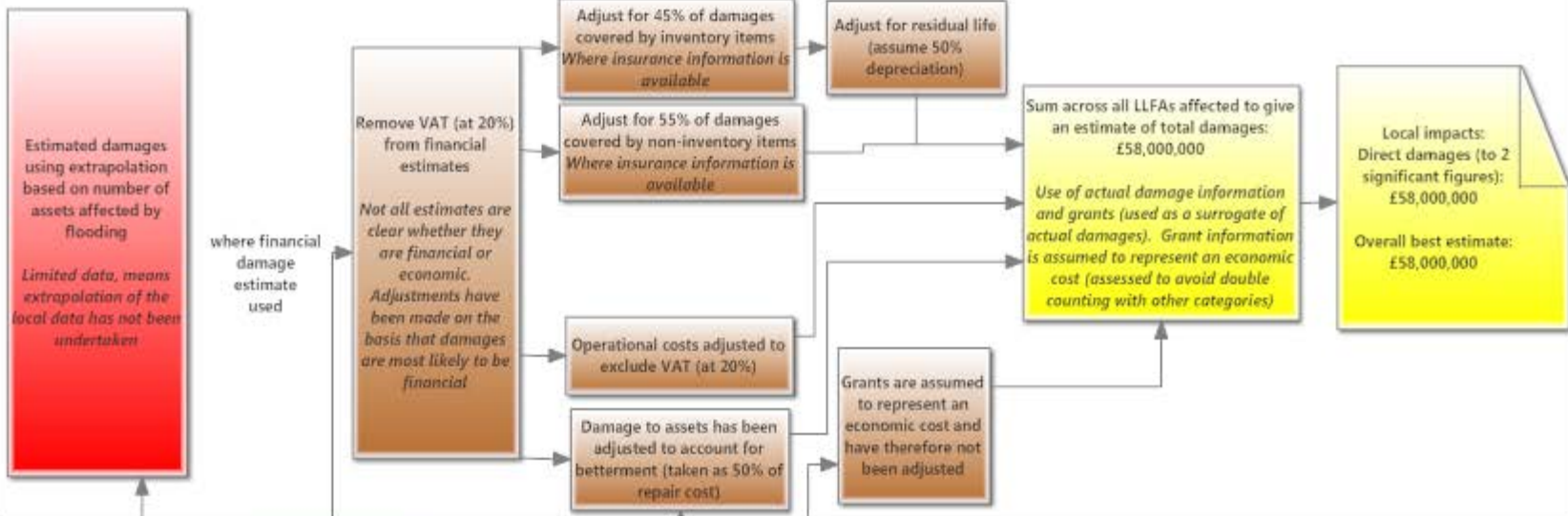
Uncertainty Rating	
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Low-moderate	
Moderate	
Moderate-high	
High	

Section 9 Local Authorities & local government infrastructure

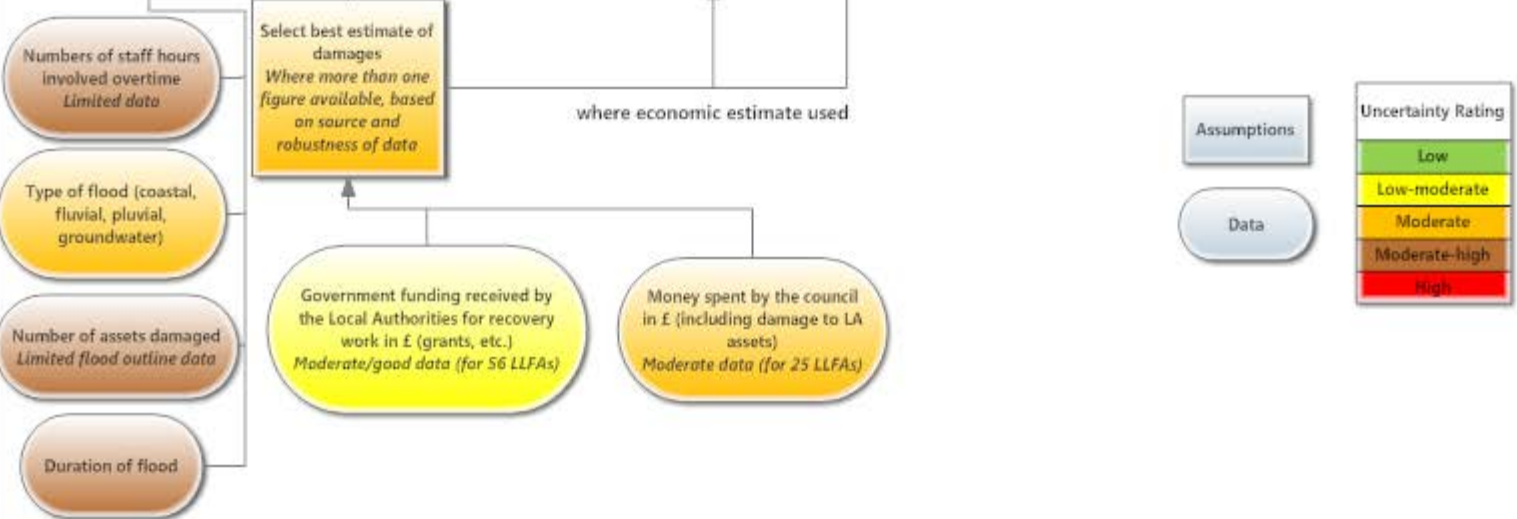
National



Adjustments and revisions required to obtain BEST economic estimate of damages

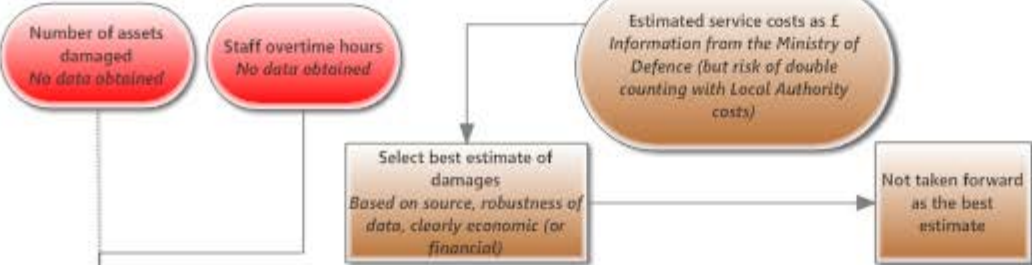


Local

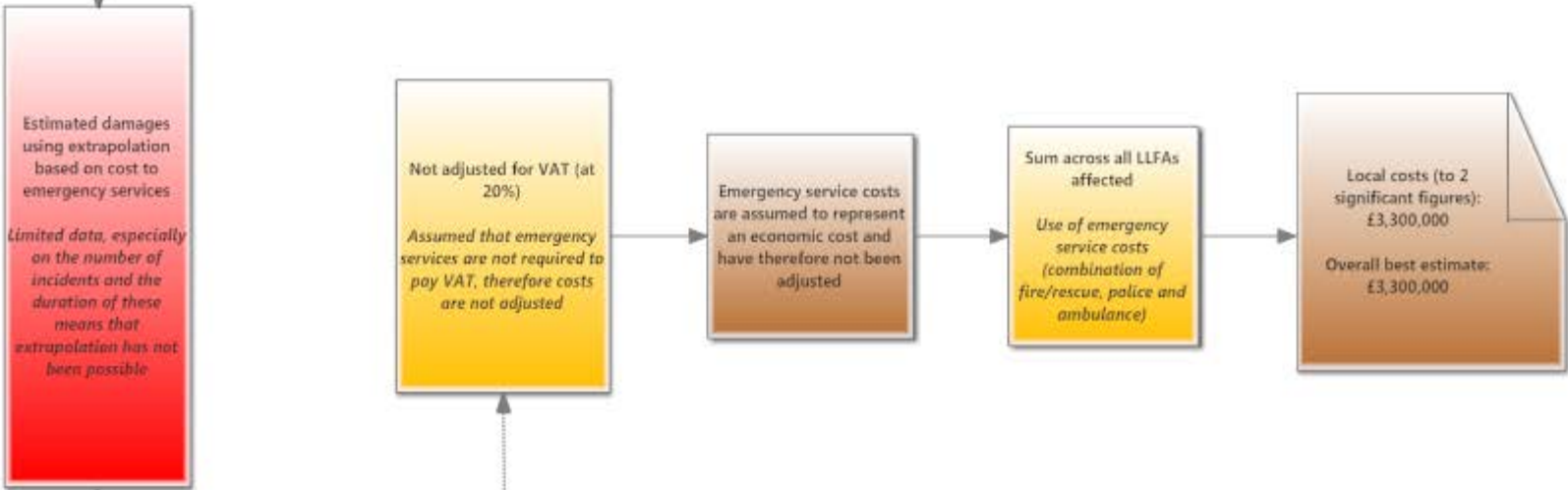


Section 10 Emergency Services

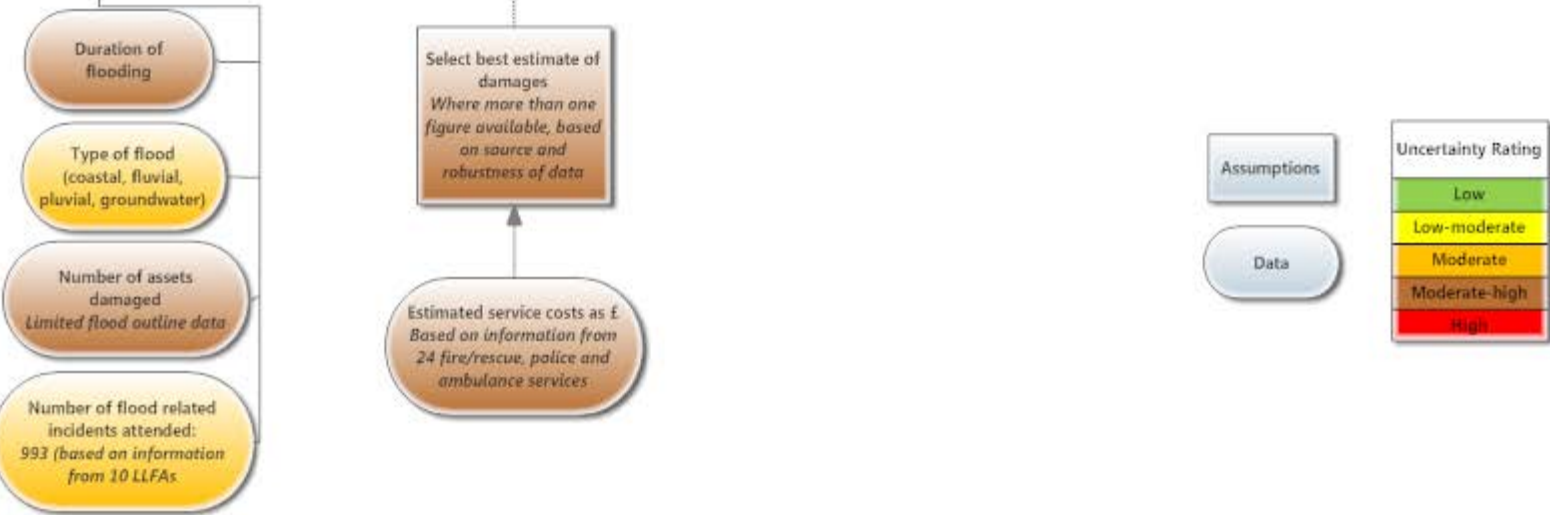
National



Adjustments and revisions required to obtain BEST economic estimate of damages



Local



Section 11 Flood risk infrastructure

National

Number of shifts (8 hr) worked by Environment Agency staff involved in flood response: 34,507

Number of flood defence repair projects allocated funding 890 with 844 relating to repair damages flood defences

Cost of undertaking repairs to flood risk management infrastructure in England: £137,000,000 (information provided by the Environment Agency)

Select best estimate of damages
Based on source, robustness of data, clearly economic (or financial)

Cost of restoring coastal defences in Wales: £11,400,000 (financial cost) (Natural Resources Wales, 2014)

Adjustments and revisions required to obtain BEST economic estimate of damages

Estimated damages using extrapolation based on damages per flood infrastructure asset
Limited data on number/length of assets damaged means extrapolation has not been possible

Cost of undertaking repairs to flood risk management infrastructure in England considered to represent an economic cost

Economic estimate of total costs of repairs to flood risk infrastructure in England and Wales
Sum of economic costs for England and Wales

National damages:
England: £137,000,000
Wales: £9,500,000
Overall best estimate (England and Wales): £147,000,000

Cost of restoring coastal defences in Wales relate to reinstatement of infrastructure to pre-storm conditions rather than betterment to provide improved standards or protection. Therefore adjustment of the figures to account for betterment is not necessary

Remove VAT (at 20%) from financial estimates

Estimated economic cost of restoring coastal defences in Wales: £9,500,000

Local

Types of flood prevention/remedial works undertaken

Type of flood (coastal, fluvial, pluvial, groundwater)

Number, length, type of flood infrastructure affected
Very limited data (for 3 LLFAs)

Duration of flooding

Select best estimate of damages
Where more than one figure available, based on source and robustness of data

Not taken forward as the best estimate

Estimated damages/repair costs as £
Includes Local Authority data

Costs to Internal Drainage Boards (IDBs) as £
Limited data (for 6 LLFAs)

Government grants received to undertake repairs as £
Includes Environment Agency data

Assumptions

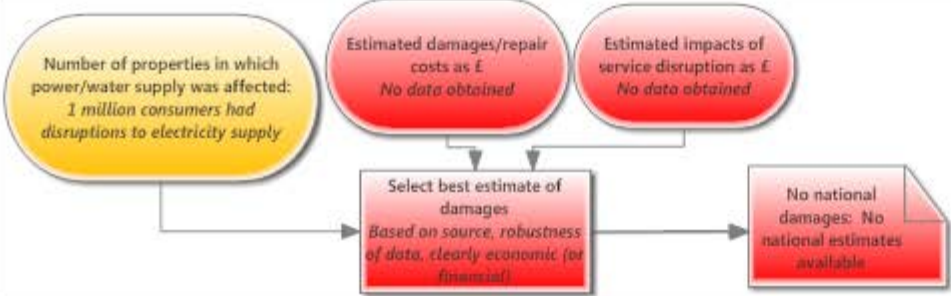
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Uncertainty Rating

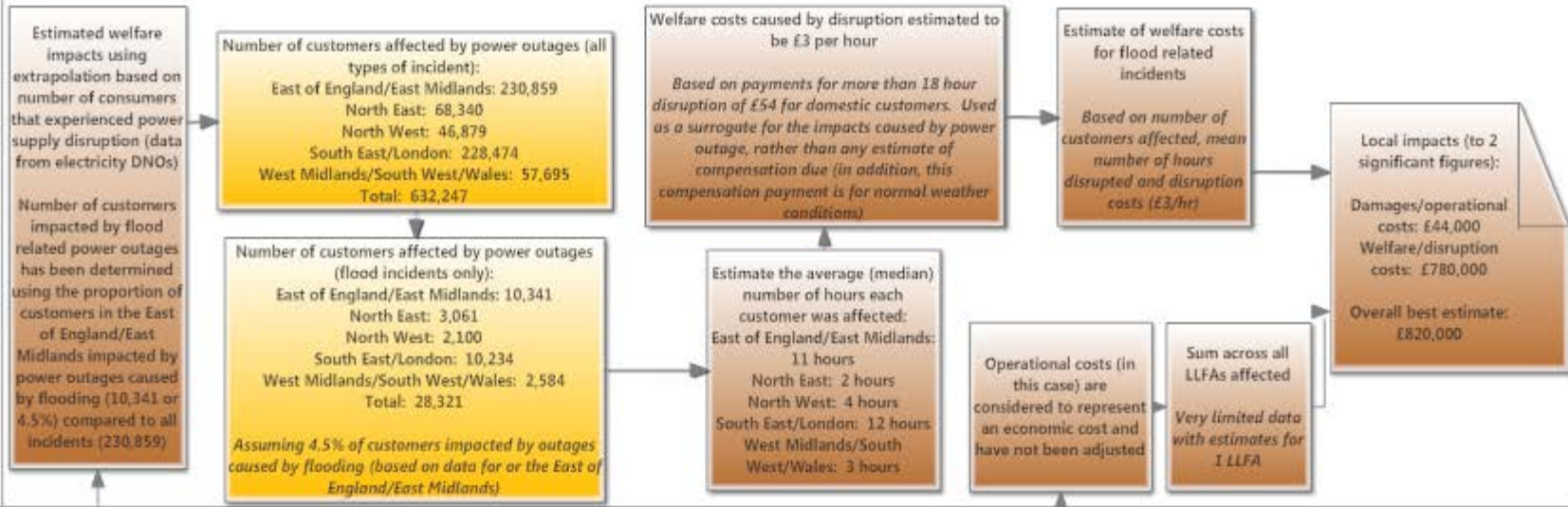
Low
Low-moderate
Moderate
Moderate-high
High

Section 12 Utilities - Energy

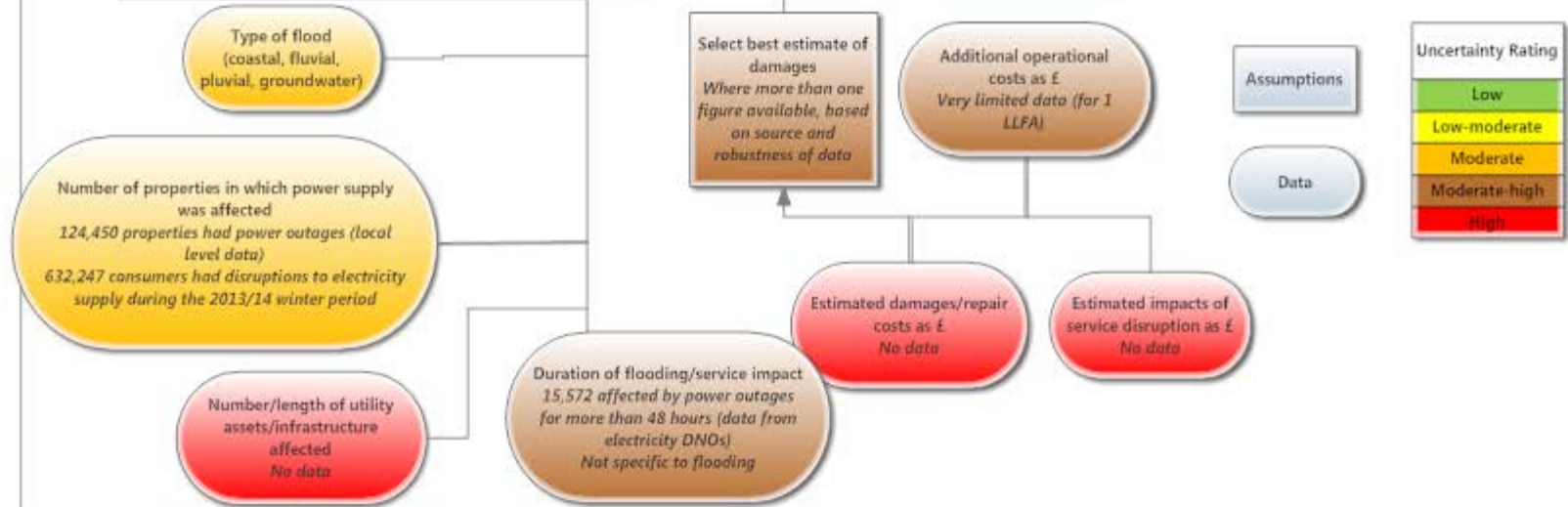
National



Adjustments and revisions required to obtain BEST economic estimate of damages



Local

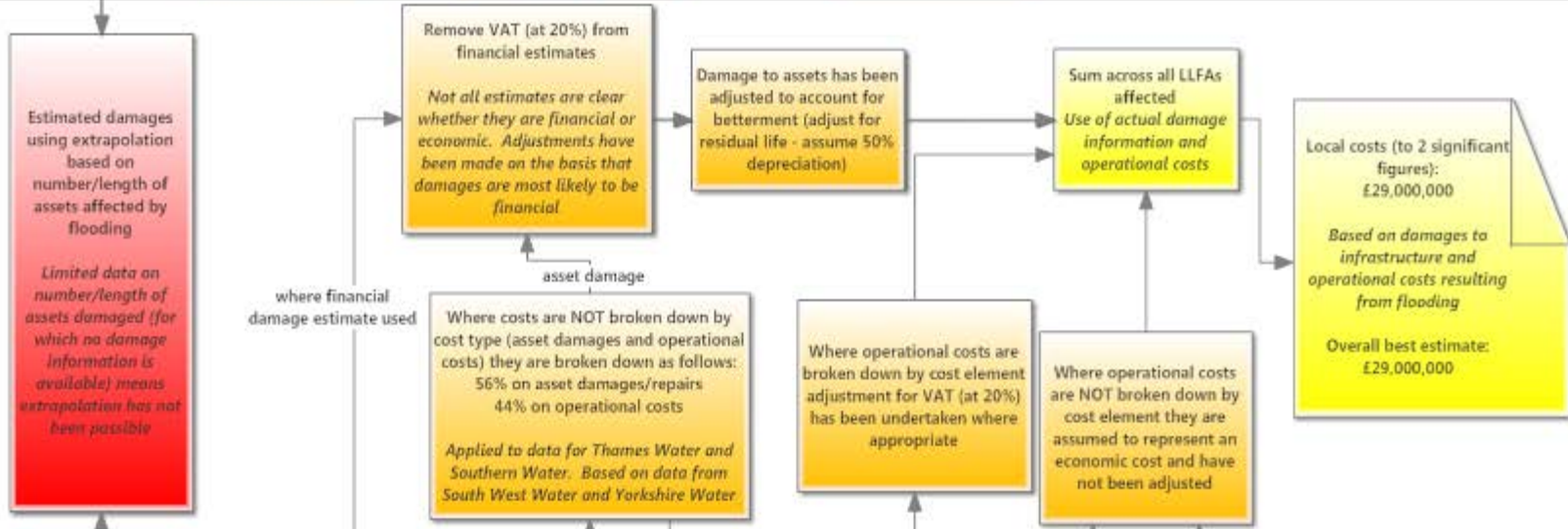


Section 13 Utilities - Water

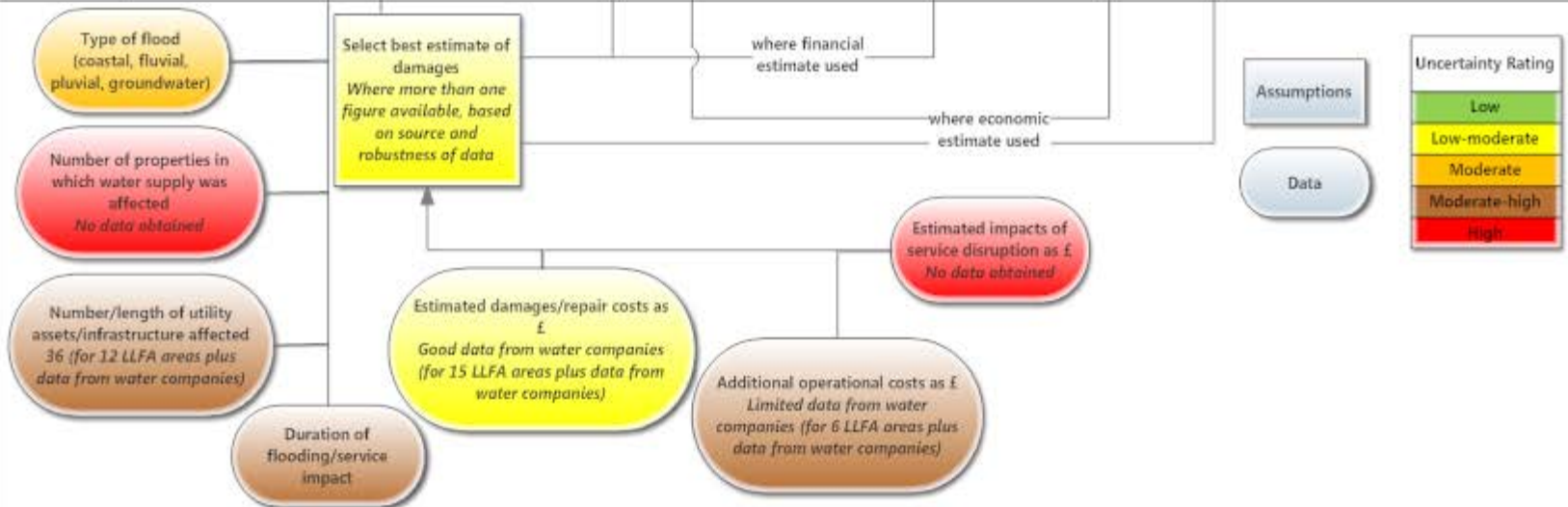
National



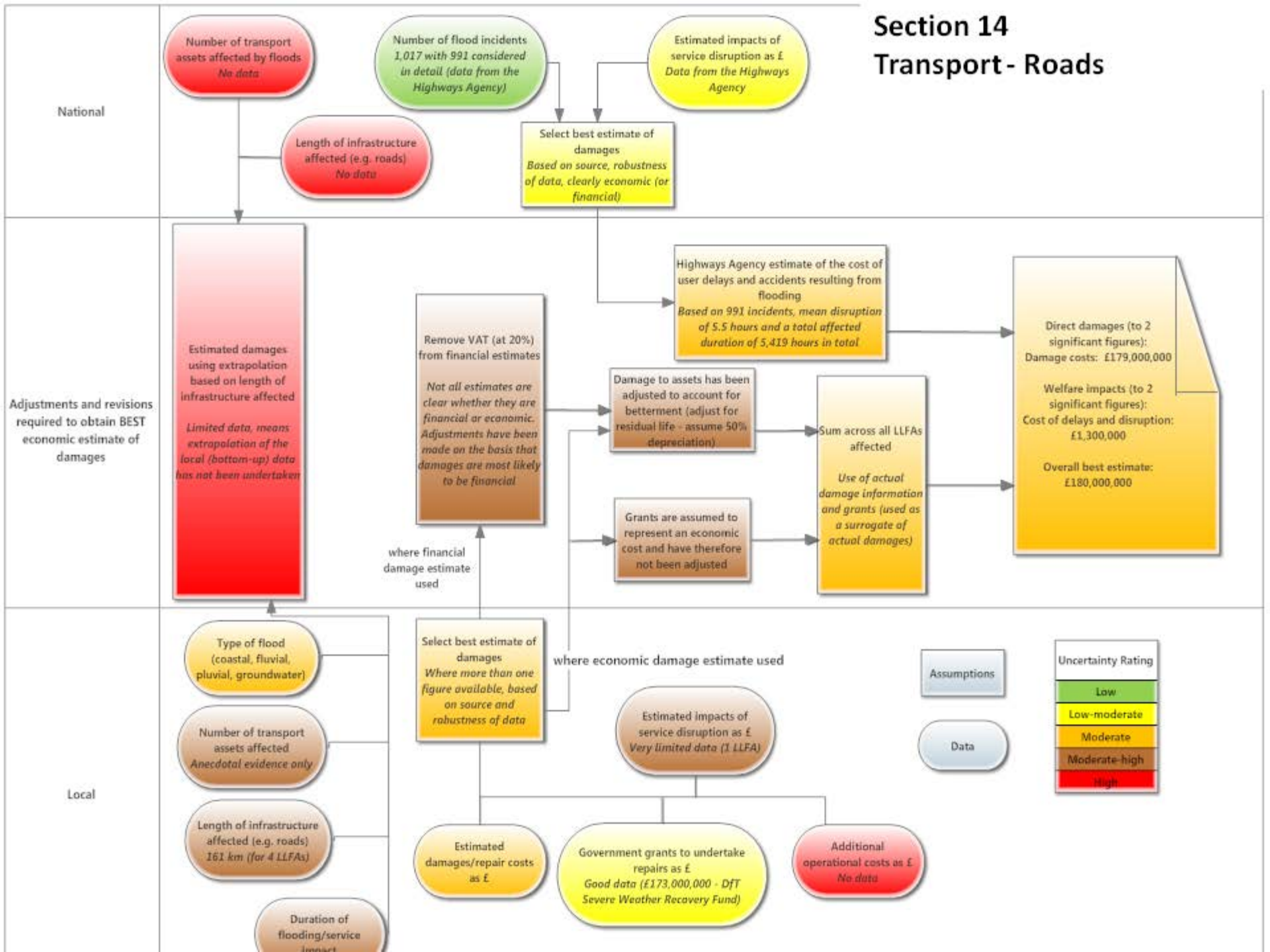
Adjustments and revisions required to obtain BEST economic estimate of damages



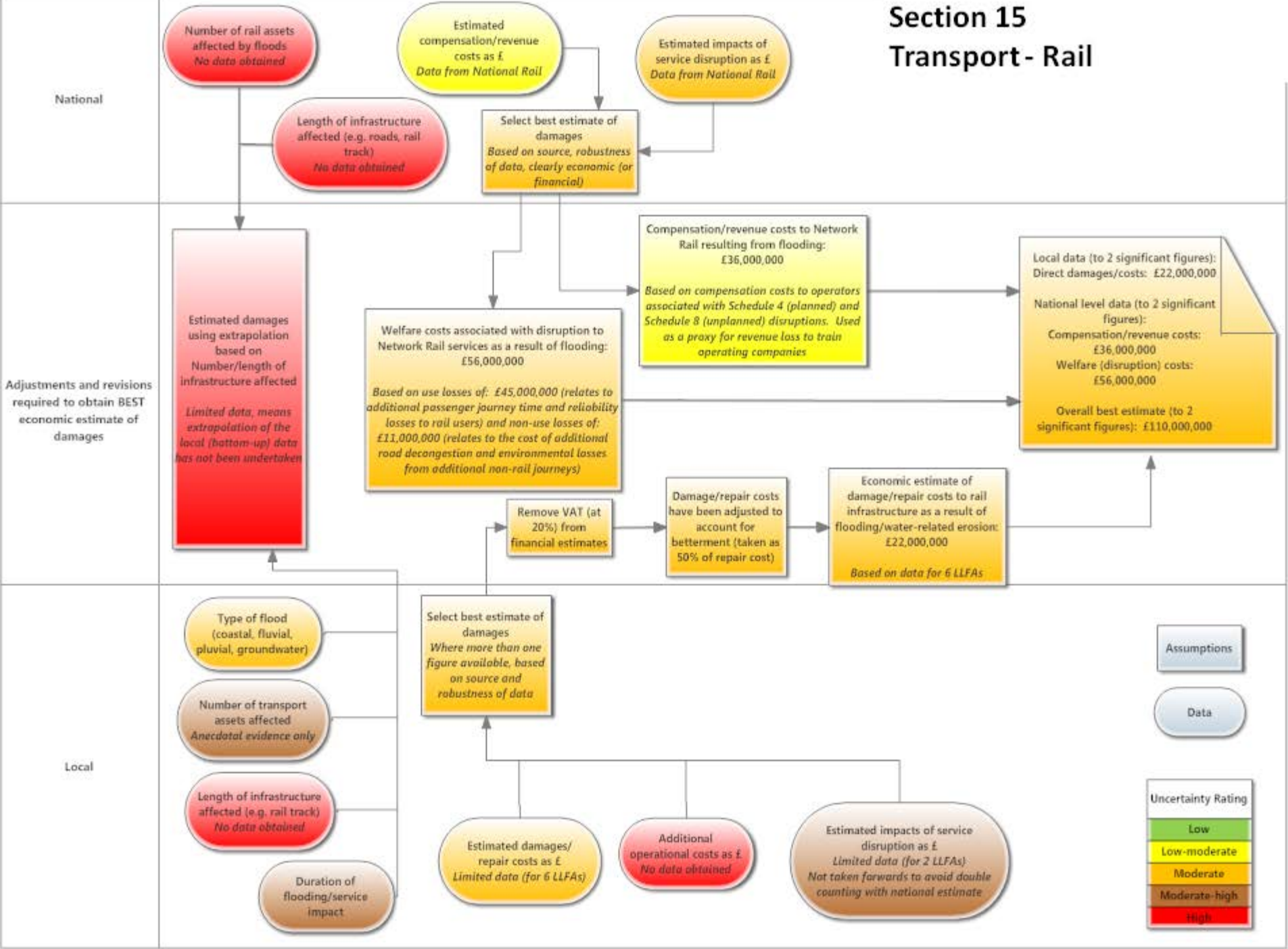
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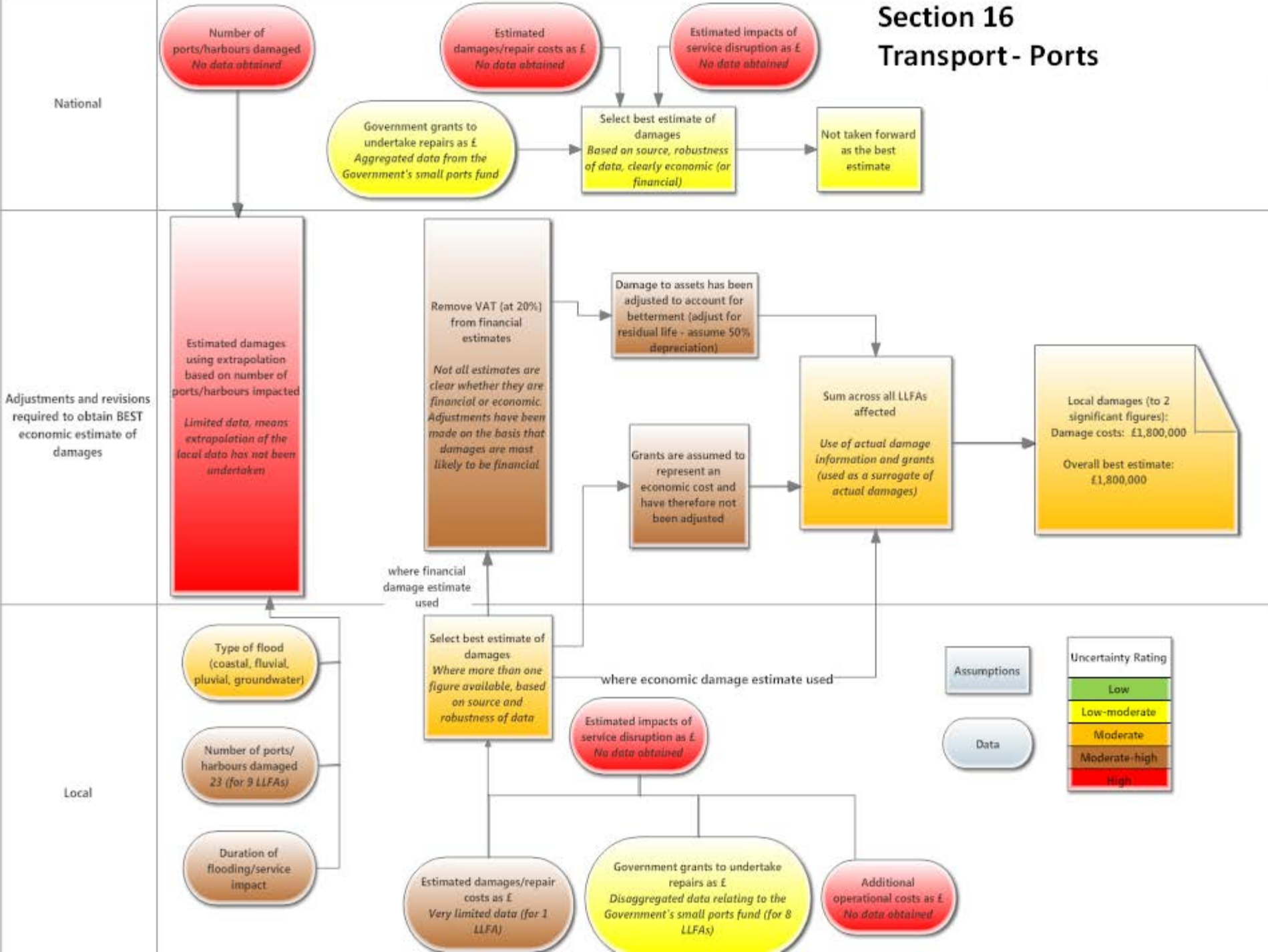
Section 14 Transport - Roads



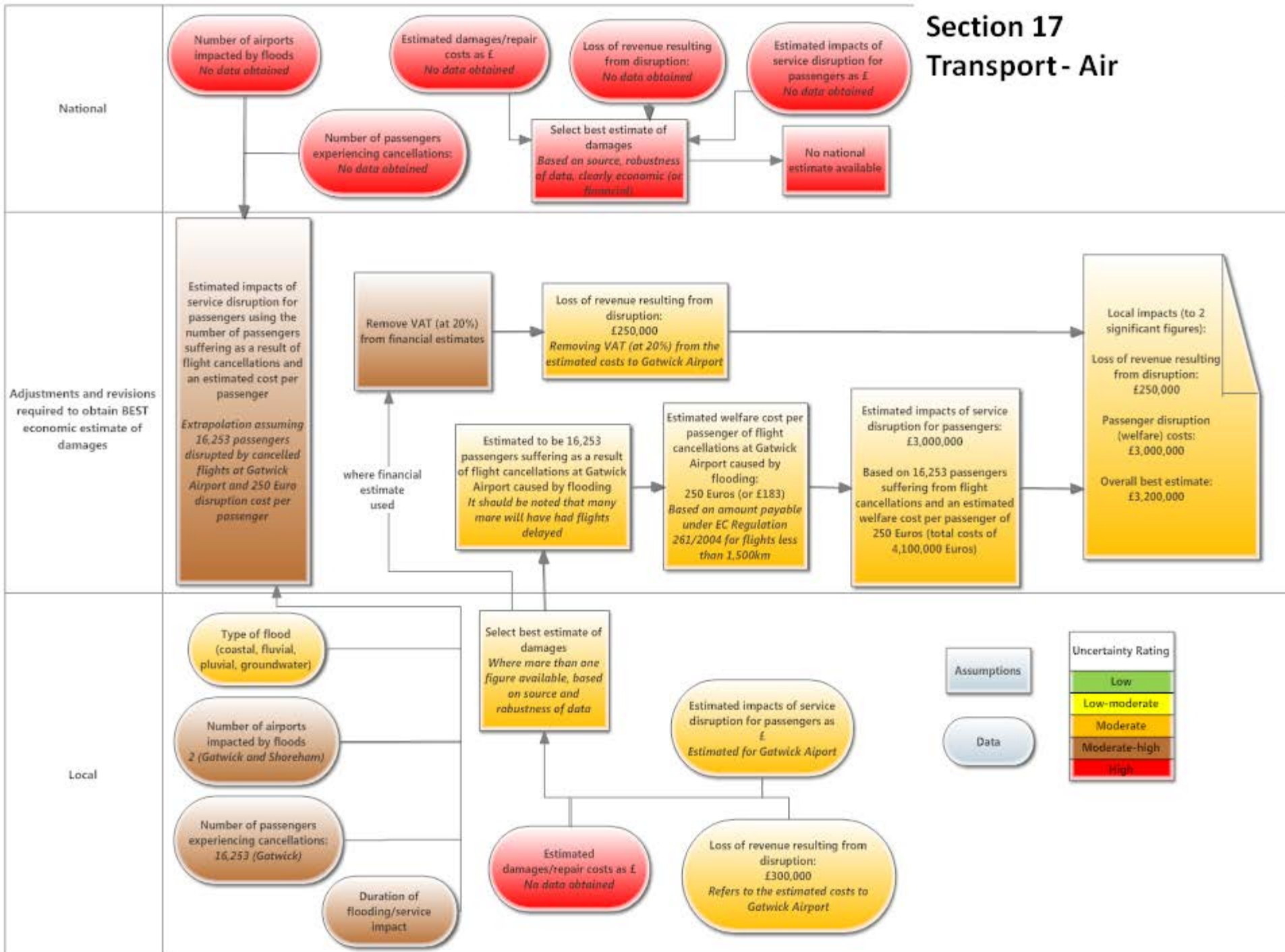
Section 15 Transport - Rail



Section 16 Transport - Ports

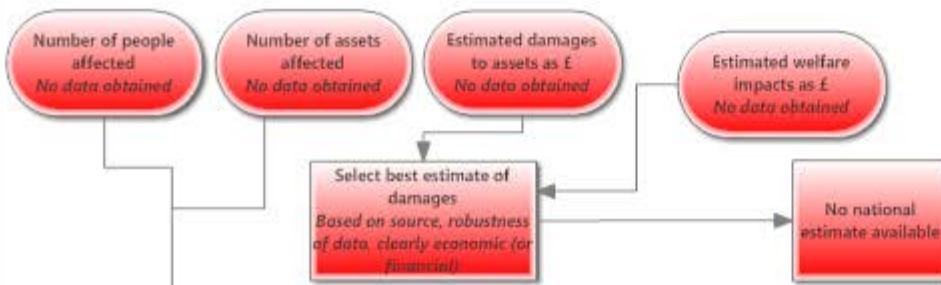


Section 17 Transport - Air

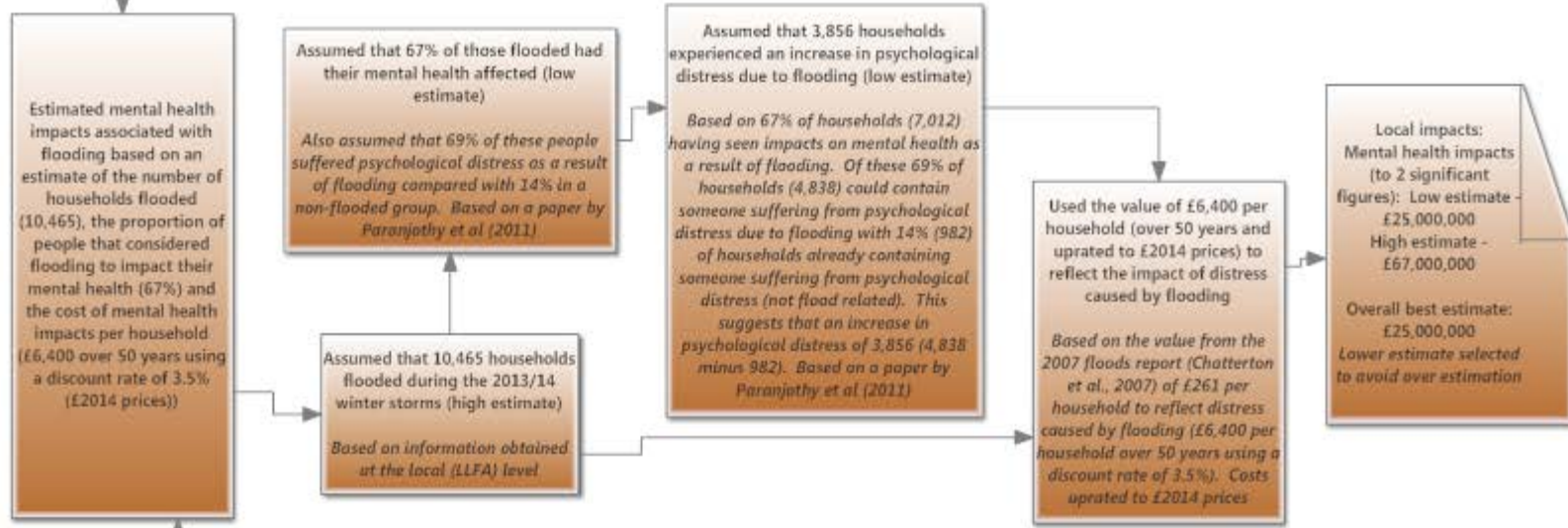


Section 19 Public Health

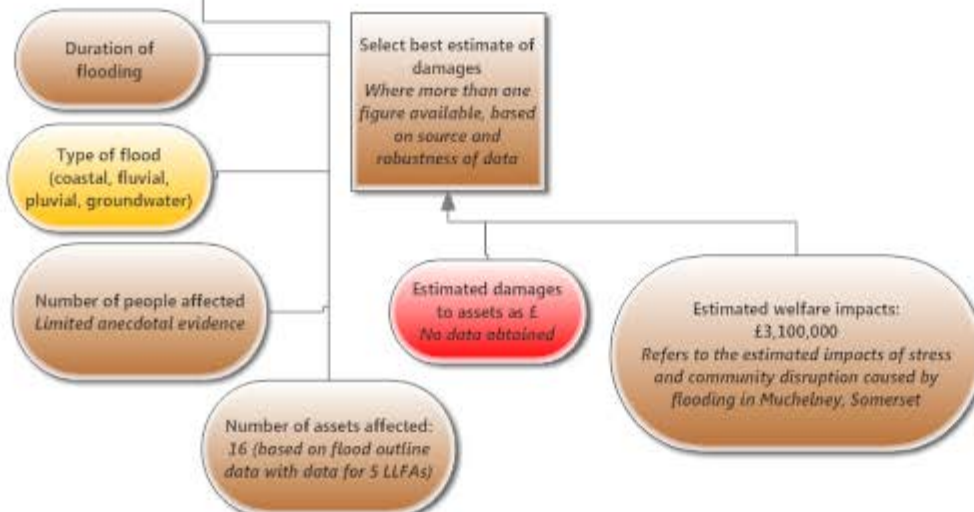
National



Adjustments and revisions required to obtain BEST economic estimate of damages



Local



Assumptions

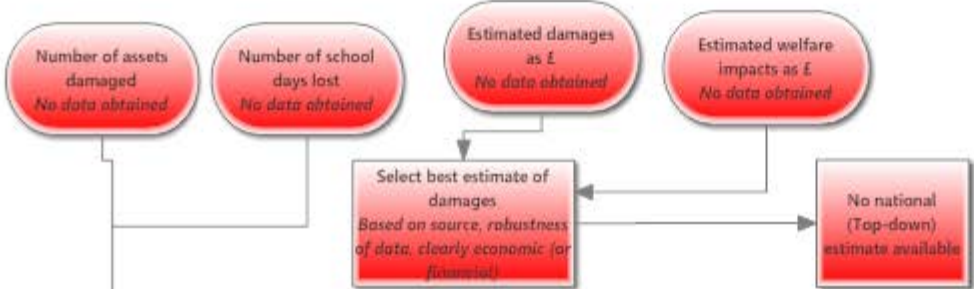
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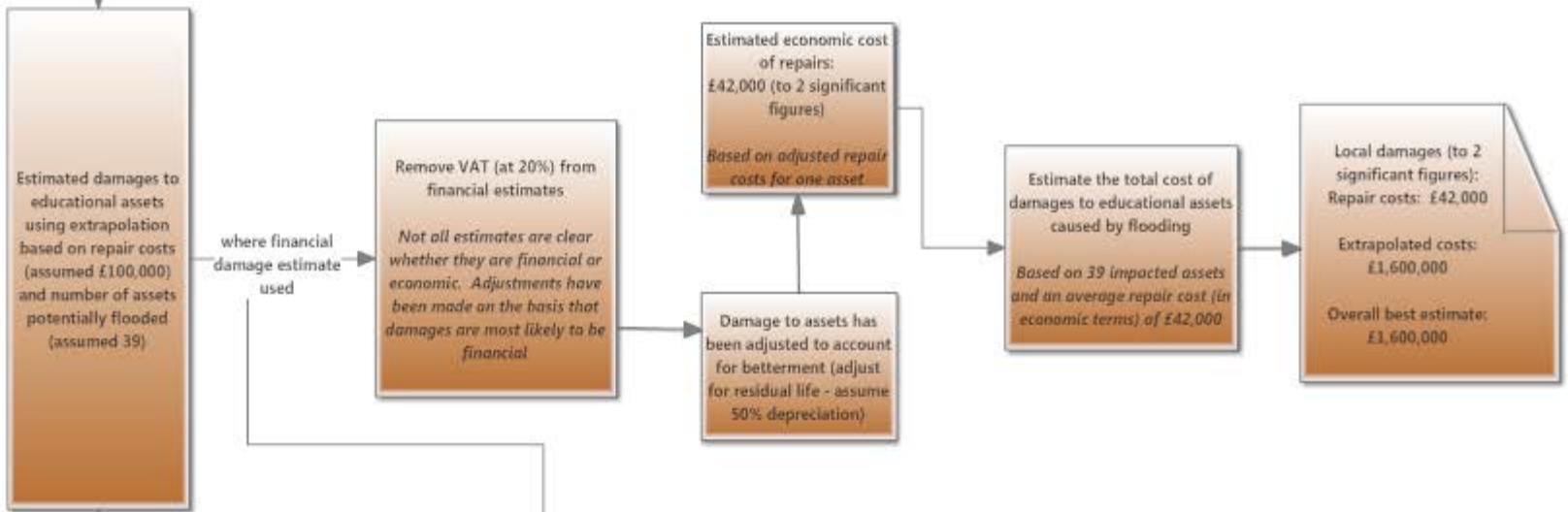
- Low
- Low-moderate
- Moderate
- Moderate-high
- High

Section 20 Education

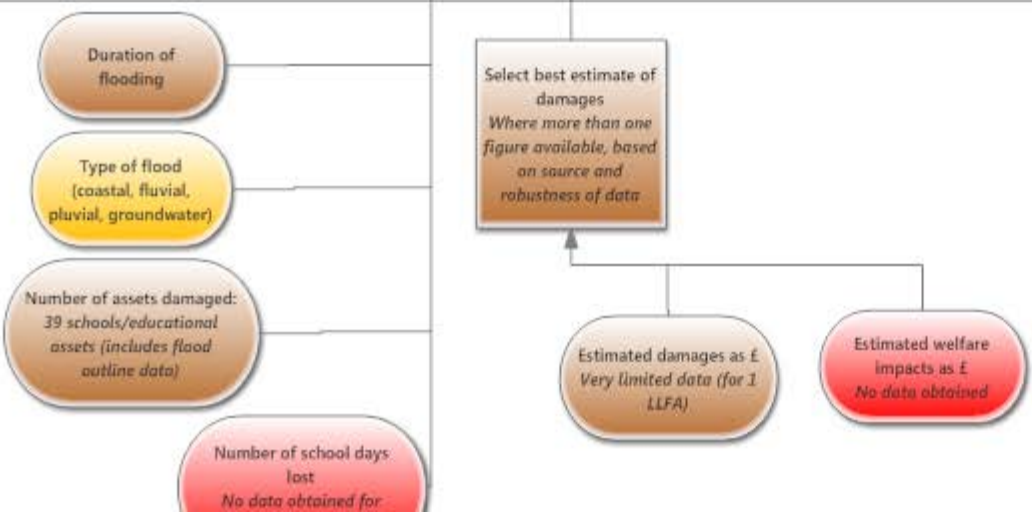
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Adjustments and revisions required to obtain BEST economic estimate of damages



Local



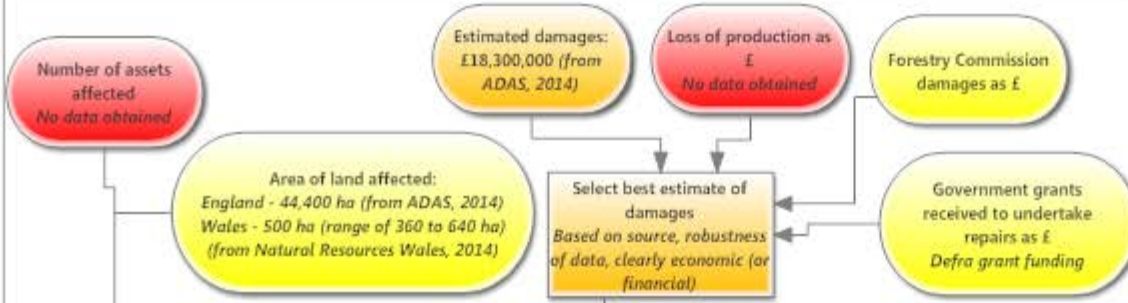
Assumptions

Data

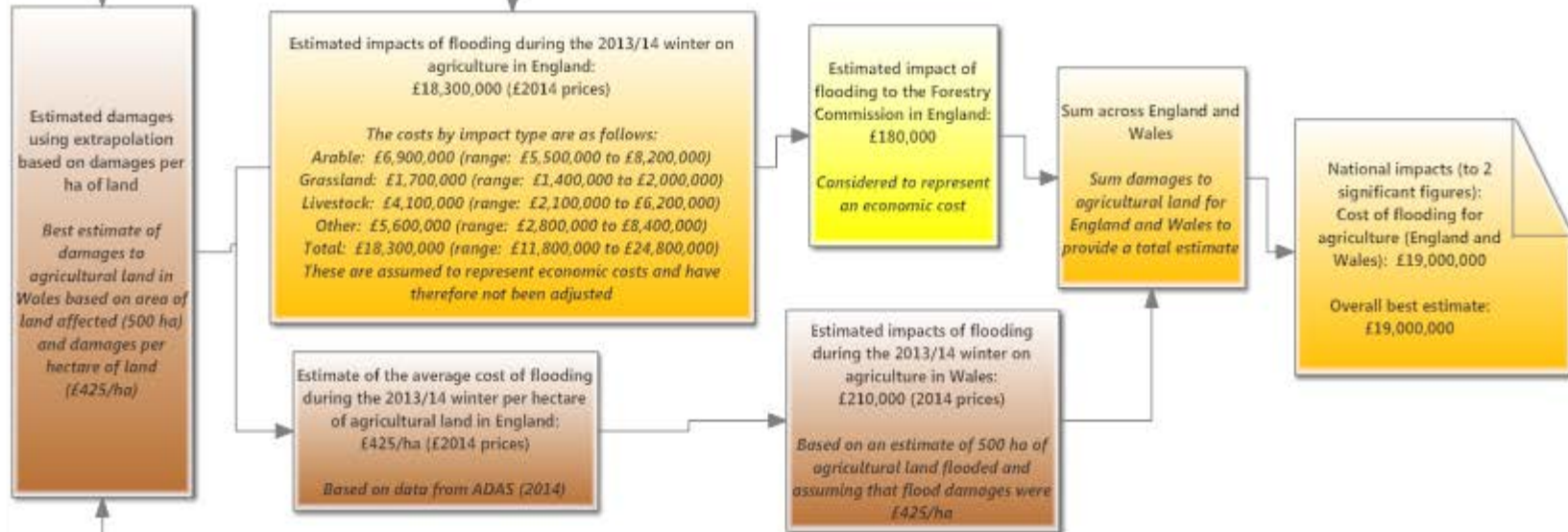
Uncertainty Rating
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Low-moderate
Moderate
Moderate-high
High

Section 21 Agriculture

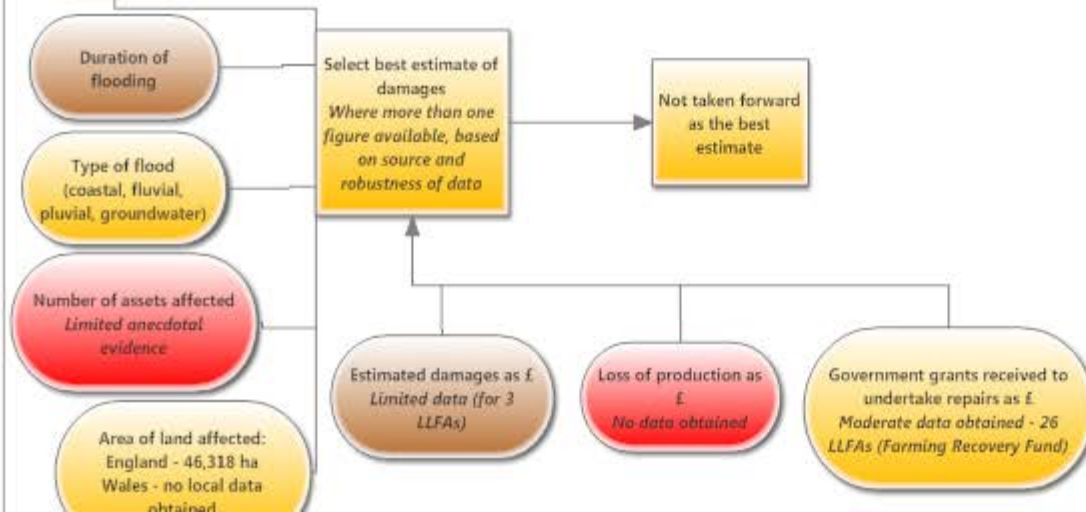
National



Adjustments and revisions required to obtain BEST economic estimate of damages



Local



Assumptions

Data

Uncertainty Rating

Low

Low-moderate

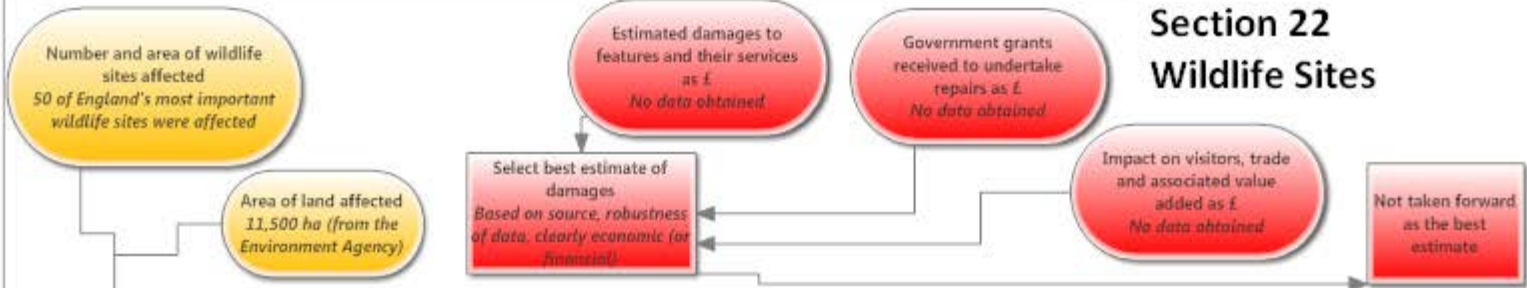
Moderate

Moderate-high

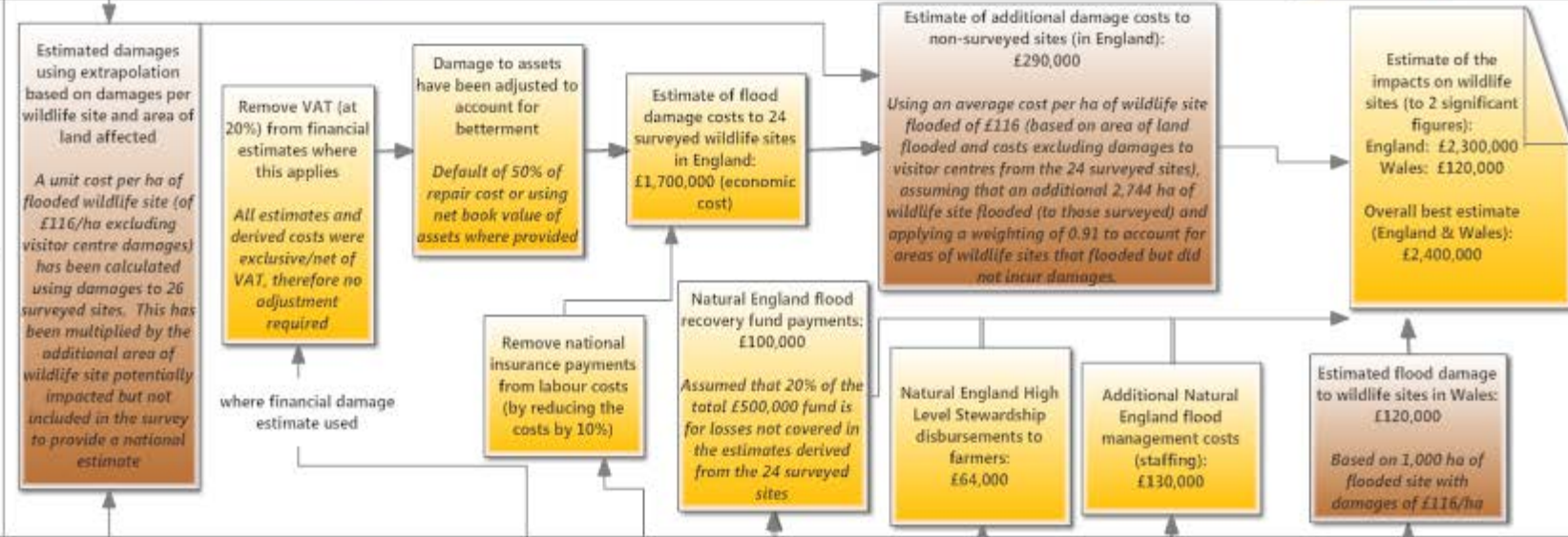
High

Section 22 Wildlife Sites

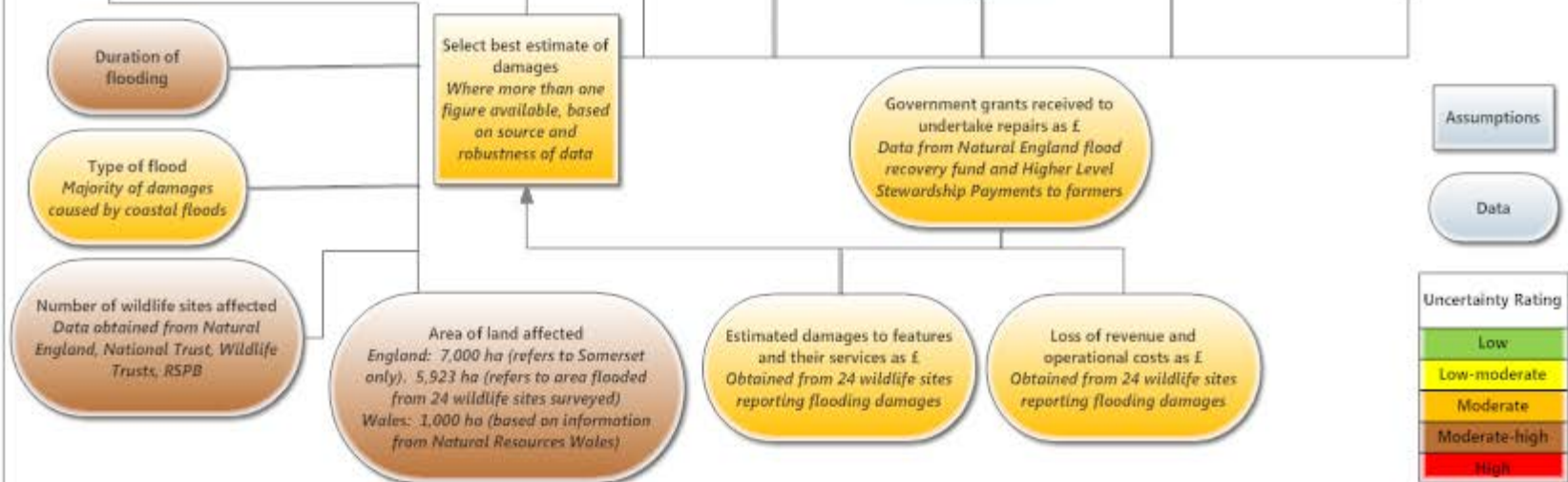
National



Adjustments and revisions required to obtain BEST economic estimate of damages

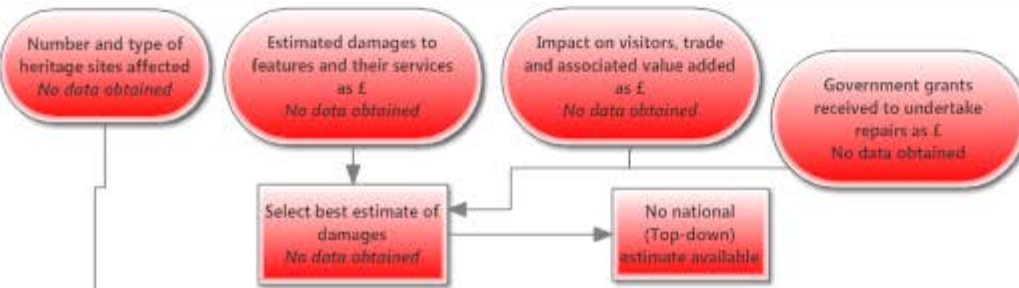


Local

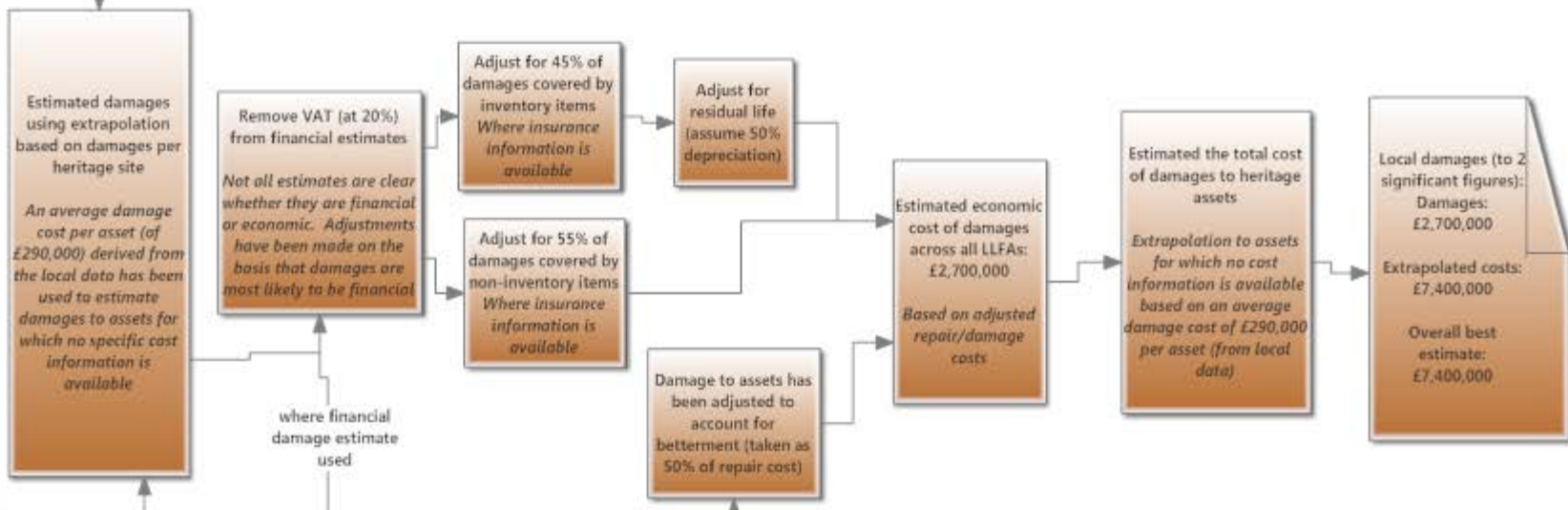


Section 23 Heritage sites

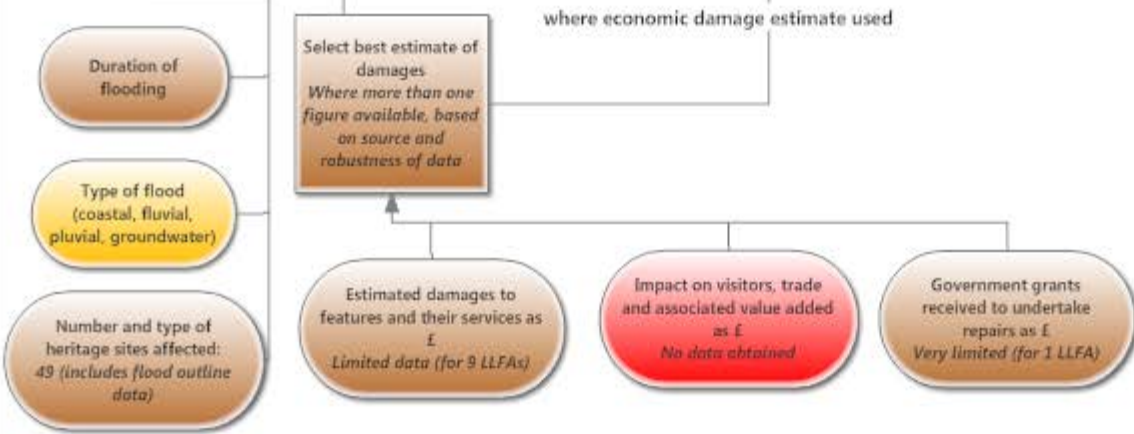
National



Adjustments and revisions required to obtain BEST economic estimate of damages



Local



Assumptions

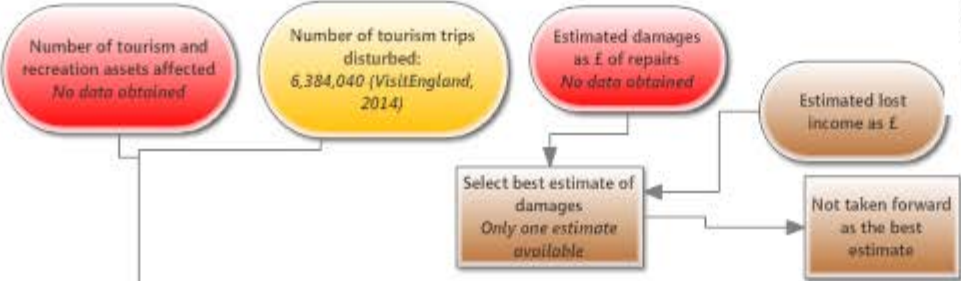
Data

Uncertainty Rating

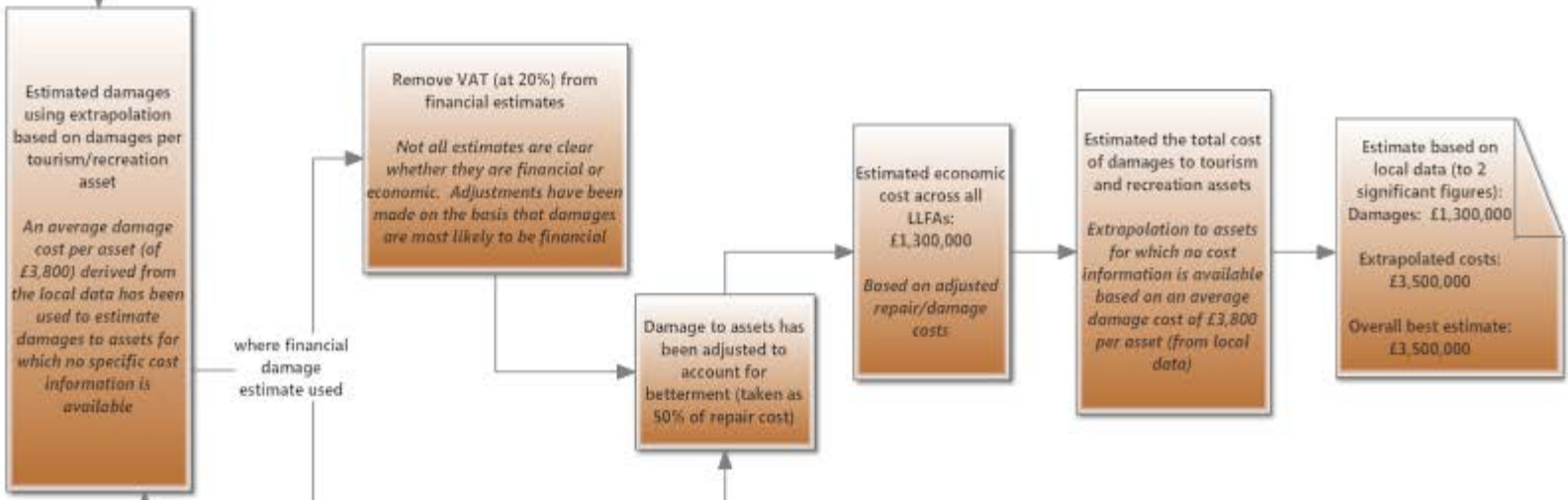
Low
Low-moderate
Moderate
Moderate-high
High

Section 24 Tourism & recreation

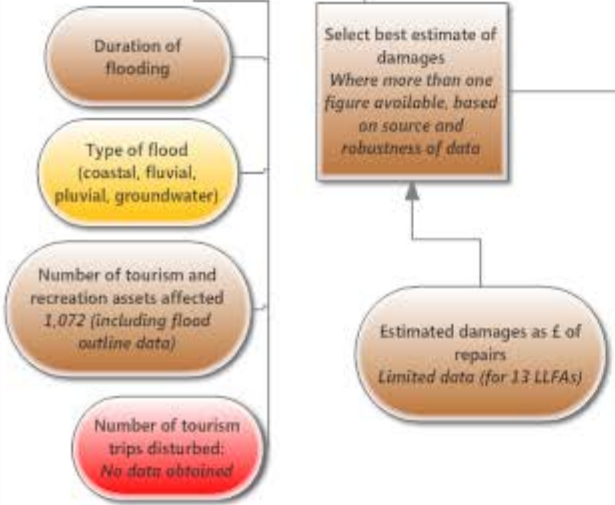
National



Adjustments and revisions required to obtain BEST economic estimate of damages



Local



Assumptions

Data

Uncertainty Rating

Low
Low-moderate
Moderate
Moderate-high
High