

Subject: Fairbourne Technical Group

Present: Lisa Marshall (YGC)
 Huw Williams (YGC)
 Alun Osbourne (YGC)
 Rob Williams (YGC)
 Helen Griffith (YGC)
 Greg Guthrie (RHDHV)
 Mike Phillips (UWTSD)
 Andrew Morgan (UWTSD)
 Kerry Keirle (WG)
 Ben Hext (NRW)
 Susie Tudge (NRW)
 Stephen Buss (H-G)
 Rob Low (RIGARE)
 Philip Bennett-Lloyd (JBA)
 Phil Parker (FFC)
 Steffan Williams (YGC)

Author: Steffan Williams

Date: 04.05.17

Location: Ship Inn, Dolgellau

Apologies:

Item No	Action	By who	Date
1	Welcome, introductions and apologies		
2	<p>Improving the confidence in the timing of trigger points</p> <ul style="list-style-type: none"> • KK suggested attempting to gain a better understanding of the rate of local sea level rise as he felt that this was a key issue regarding further timelines. • LM responded by explaining that the purpose of the Technical Group and modelling of the processes which threaten to flood the village is to gain a greater understanding of when these trigger points are likely to come to play. • GG stated that it would be very difficult to get an accurate sea level rise forecast locally off the Barmouth gauge as data only goes back to 1991 and many astronomical and meteorological harmonics affect short-term sea level. PB-L agreed and suggested predicted rise rate should not be absolute because of the number of variables in place, but possibly can feature a worst and best case scenario? • PP revealed that FFC had been in contact with Pat Monroe from the Department of Energy and Climate Change, who suggested that a sea level rise of 1.8mm per year is most likely. NASA suggest a 3.4mm yearly rise which would still be below the rate upon which the SMP2 was based on. PB-L added that the more we know, the less certain we get, but that the use of best and worst case scenarios when referring to future sea level rise is best. • GG asked whether sea level rise rate and timelines should be standardised by Welsh Government in line with other coastal communities in similar situations. It was agreed that official figures would be required to promote community reassurance. BH suggested that the release of the UK Climate 		

	Projections 2018 in March would increase understanding of west coast sea levels.		
3	<p>Data Sharing</p> <ul style="list-style-type: none"> • SB highlighted the need to share data and information amongst the different parties involved in the tech group. LM suggested that a SharePoint be setup where all consultants involved will be able to access information regarding the project. • SB also declared an urgent need to produce a technical note with cross party agreed parameters and figures so that each model would be relatable to each other. LM agreed and would look to produce this asap. 	LM	ASAP
4	<p>Feedback and findings from embankment analysis</p> <ul style="list-style-type: none"> • GG presented detailed study of the embankment defence against potential sea level rise and storm event scenarios. The study goes into detail about expected sea level during particular strength storms and wind speeds with regards to different predicted sea level rise in the future. GG stated also the likely costs of maintaining and strengthening the embankment to withstand different future events and the risks attached to not investing in the defence over time. • PP appreciated the depth of the analysis but stressed that it would need to be simplified before presenting the findings to the community. 		
6	<p>Feedback and findings from groundwater monitoring</p> <ul style="list-style-type: none"> • SB showed the current findings of the groundwater modelling analysis. The main finding was that shallow drainage in the village is performing efficiently at keeping the groundwater from breaching to the surface, provided there is available capacity for the water to go to. The worry would be that in extreme events the ditches would fill and that loss of hydraulic gradient would lead to groundwater breach. The tide does not seem to have too much of an effect on groundwater levels although there is a need to keep an eye on average sea level rise. Sea level rise will also affect the duration which the tidal gate is closed, this will have an effect on the village hydrology and potentially put it under strain in extreme events. The modelling needs a little further tweaking but SB was confident that it would be accurate. 		
7	<p>Feedback and findings from coastal analysis</p> <ul style="list-style-type: none"> • MP showed UWTSDs analysis into Barmouth gauge sea level data, historical wave data and future predictions and their assessment of beach level change. Sea level rise rate has slowed from 4.7mm per year to 2.6mm per year from 2000. Annual extreme sea level since 1991 has showed a reducing trend. The analysis of wave statistics showed that approximately 75% of waves emanate from Southwest of which approximately 12% exceeded 1.5m. MP went on to present the current findings from the beach profile analysis which shows in much clearer detail than before the processes involved in long-shore drift. 		

8	<p>How to merge all models together?</p> <ul style="list-style-type: none"> • It was agreed that three separate models (groundwater, sea defence and embankment) would be kept apart due to the amount of variables and complexity of merging all models. Keeping the models apart would also make communicating the data to the community much easier and less confusing. • SB important to note that risk from different models will be different for example the main risk the groundwater modelling will show is soggy gardens compared to potential 1 meter breach of embankment. • GG pointed that the identified risk should be linked to the cost of defending the village from that particular risk over time. • KK suggested that the data should be presented as different scenarios for example; what would happen if we did nothing over time, raise the embankment over time etc. This would allow any future changes in sea level rise rate or climate change predictions to be absorbed by the models. LM suggested that we should explore the possibility of showing the models through virtual reality software which would show professionalism whilst being easy to understand by the community. • PB-L raised the issue of inevitable social justice concerns by the community which GG replied that the Technical Group's purpose was to show the data. Should utility and infrastructure companies be consulted prior to releasing the data to the community so that some answers are in place? LM explained that she was in the process of forming an Infrastructure Technical Group which would involve the appropriate stakeholders and try and work a timeline for future events based on the predictions of the models. 	LM	??
9	<p>Introduction of 'blue sky thinking' into the Masterplan</p> <ul style="list-style-type: none"> • LM put forward the idea of the 'blue sky thinking' sessions to try and better the perception of the village and its future. • GG suggested that the current price of Salt Marsh land was very high and given the suitable topography of Fairbourne and the surrounding lowlands, could be an idea to consider? • PB-L stated that this concept was a very difficult idea to manage carefully. The idea of someone profiting off of other peoples' misfortune doesn't go down well with those affected. • KK declared that Welsh Government are currently reviewing their coastal change policy and that there may be grounds to talk further once the results are revealed. 		
10	<p>Date of next meeting</p> <p>Next Technical Group Meeting is arranged at 11am the 6th of July 2017, at the Ship Inn Dolgellau. It was agreed that the groundwater modelling team (SB</p>		

	and RL), coastal processes team (UWTSD) and GG would meet up to correlate findings prior to the next meeting.		
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