

Fairbourne: Moving Forward

Frequently Asked Questions

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As part of the Fairbourne: Moving Forward project and in response to a list of questions raised by Fairbourne Facing Change (dated 17.04.14), a list of *Frequently Asked Questions* has been produced to provide further insight into the project's aims and objectives.

The initial set of questions have come from the community and develop the original information that was made available before the public meeting on the 25th April 2014. This current document, which will be updated on a regular basis and distributed to all stakeholders, aims to address matters of concern or interest raised by any stakeholder. However, please bear in mind that some responses may change as the project moves forward due to the level of information available at the time of publication of this document.

The most up-to-date version of the *Frequently Asked Questions* will be published on the Fairbourne Facing Change website and distributed to all homeowners and residents of Fairbourne. A *Glossary of Terms* will also be produced and distributed accordingly.

All questions have been colour-coded to assist you with the progress of each question:

Questions in Red: Have now been updated where possible. At the time of submission, were not considered by the community as being fully-answered or required a more specific answer.

Questions in Yellow: The community required an update or further detail.

Questions in Green: Accepted – no further action required

If you have any queries relating to this document (or require a copy in larger print), please raise them with a member of your community or alternatively, please contact the undersigned, who will log your query and respond to you in a timely manner.

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1. What is the status of SMP2 as far as Gwynedd Council is concerned? It seems to have been adopted as policy when it is a 'live' document. Can you clarify this please.

SMP2 is the Council's policy document for managing the coast and will only be revised if there is a major issue which materially affects the policy decisions. The Plan would be revised, for example, if there was a significant change in projected sea level.

2. Now SMP2 is A Gwynedd Council policy how is it informing planning policy decisions? Are there plans to include it in the LDP? (Local Development Plan)

The SMP is a material planning consideration for development management purposes, which means that it is reasonable to consider it in assessing relevant planning applications for development. It will also inform the development of relevant policies within the emerging Joint LDP.

3. It appears that as far as the Welsh government is concerned SMP2 has not yet been adopted, nor does it seem to be underpinned by an identified budget. Can you clarify this please?

The Minister for Natural Resources agreed the West of Wales Shoreline Management Plan (SMP2) on the 20th of October 2014. It included a caveat that the situation at Fairbourne should be constantly monitored. He has agreed to send a letter to Natural Resources Wales and the Chair of the Coastal Group, accepting the plan.

The SMP2 is a non-statutory policy document for coastal flood and erosion risk management planning. It takes account of other existing planning initiatives and legislative requirements, and is intended to inform wider strategic planning. The SMP does not set policy for anything other than coastal flood and erosion risk management.

The SMP2 promotes management policies for the coastline into the 22nd Century to achieve long term objectives, while being technically sustainable, environmentally acceptable and economically viable. Taking into account the forecasts of increasing risks due to climate change impacts, the SMP2 provides an approach for meeting objectives through appropriate management change, i.e. a 'route map' for decision makers to move from the present situation towards the future.

The objectives of the SMP2 must be set out in accordance with the Government's strategy for managing risks from floods and coastal erosion, and will help to ensure that the SMP2 promotes sustainable development, with respect to people, the human and natural environment.

4. With unequivocal clarity can you please explain what is meant by Managed Realignment for Rowen Spit in the first epoch? What is your estimate of cost for this managed realignment? Who pays for it?

The generic policies headlines, such as 'Managed Realignment', have to be interpreted pragmatically depending on the local conditions and change anticipated over the epoch short term, medium term and long term (nominally from now for 20 years, from 20 to 50 years and 50 to 100 years). This has to be seen as a continuous process. The length of each epoch and the transition from each one will depend on how quickly sea level rise actually occurs.

Therefore, what we have in this instance is the recognition that Rowen Spit does prevent waves entering the estuary (it does not protect Fairbourne directly – see 8 below) and is, therefore, of some benefit and warrants more than ‘No Active Intervention’ for the first two epochs. It should, however, be noted that, at present the spit is not fixed in its position; the dunes are allowed to develop naturally. It also recognises that the spit will come under increasing pressure in the future as sea levels rise and, therefore, ‘Hold the Line’ is not appropriate given the limited benefits it provides and, as importantly, rigidly fixing the spit could give rise to problems in managing the whole estuary entrance. Given the above the default is therefore ‘Managed Realignment’ which gives landowners and operating authorities the option of adapting the existing frontage to provide a sustainable defence in the short to medium term. This is the approach that has been taken to date and no one is currently promoting significant change in the way in which this location is currently being managed.

5. *With unequivocal clarity can you please explain what MR means for the other epochs as they come into play and the estimated costs associated with them. Will it link with the Minister’s Investment Plan referred to on the ‘Week In Week Out’ programme? With 40 – 50 communities up for managed retreat why was Fairbourne singled out?*

The SMP is limited to selection from four generic policy headlines (Hold the Line, Managed Realignment, No Active Intervention and Advance the Line) as set out in the Guidance for developing SMPs. These have to be explained in relation to the individual areas and circumstances relevant to specific locations. The SMP attempts to do this. In this, it is recognised within the SMP that management, particularly in the Fairbourne area, goes beyond just management of defences and involves raising awareness and planning for change within communities.

As stated earlier (with ref to original FAQs) the updated SMP, based on existing evidence, has emphasised that at present and over the next 40 years we can defend and that we should defend. This will be reviewed as further evidence is gained on sea level rise. However, this means that over epoch 2 (typically over the 20 to 50 years’ time period) we have to prepare for and start managing the change in risk and preparing for the longer term when defences would no longer be sustained. We need to address and investigate now all the important issues this raises but with a present policy of ‘Hold the Line’. As change becomes necessary, we have to manage this and hence the policy is ‘Managed Realignment’ in epoch 2. In the longer term (epoch 3) defences would no longer be managed and hence a policy of ‘No Active Intervention’.

The specific details of how this change is managed needs to be defined and is the reason for ongoing discussion with the community and other partners in the project.

6. In terms of the railway can you explain unequivocally what Hold The Line means? How defences will be developed? What will this cost? Who will pay? Can you tell us where the cost benefit analysis for each of the epochs has been undertaken?

The generic policies assigned to policy units are pragmatic options determined by circumstance. With regard to the railway there is a recognition that the railway line lies to the back of the flood plain and is at less risk in terms of the different forms of risk. The SMP has highlighted in other areas where there is increasing pressure on the transport system. The default setting is HTL which gives the rail operator the option of defending their asset. However, the SMP highlights how this needs to be considered in the future.

Despite numerous attempts, we have so far not managed to meet with Network Rail. Until a meeting has taken place and subsequent conversations have been had, we will not be able to provide any further response.

7. Are you convinced that Rowen Spit will not continue to provide protection from sea level rise as per SMP1? What is your scientific basis for this change? How much investment was done in drawing up these plans on the accretion increasing the height and therefore the natural defence properties of the whole length of the Spit?

Rowen Spit (PU11.4) is the length of spit which is to the north of the newly refurbished estuary defences and as such does not provide a direct defence to Fairbourne village. We know that the shingle bank is suffering from starvation because of the depletion experienced at Friog and that there is no net accretion in the system. We know that on 3 January 2014 the sea overtopped the shingle bank and the overtopping wall - this will occur more frequently as sea levels rise as a result of climate change.

The strategic monitoring which has been recording measurement along Fairbourne frontage since 1992 does show that some accretion is occurring along the Rowan Spit frontage. The accretion however is localised and as no new shingle material is being fed into the overall system the level of protection is diminishing over time.

8. Can you identify which agency is responsible for what, eg, the sea wall, the shingle, the bank and so on. Subsequently which agency funds what?

All the sea and tidal defences in Fairbourne are maintained by Natural Resources Wales, although all are privately owned. The exception to this are the structures associated with the defences (the concrete sea wall and the tidal doors/flaps) which, although on private land are deemed to Natural Resources Wales structures.

The funding for maintenance rests with Natural Resources Wales and any improvements seeking Flood Defence Grant in Aid would be channelled through Natural Resources Wales.

9. How do you see the future of the protected national monuments being catered for?

Historic monuments are managed by Cadw, which is Welsh Government's historic environment service, and they have recently been on site in Fairbourne to view the displacement and damage to the Second World War tank traps and pill box. Cadw realise the difficulty associated with maintaining the historic defences at their present location but where possible they would like to see them reinstated to their present line and level. It is unclear at present whether this is possible.

The Coastal Defence Options Study for the Friog area will take on board the wishes of Cadw so that any future designs will be able to accommodate the tank traps.

10. Whose responsibility is it to maintain and clear ditches? Ditches on Glan y Mor and in other areas have been overgrown for years.

Fairbourne lies within the Mawddach and Wnion Internal Drainage District (I.D.D) with Natural Resources Wales acting as the Internal Drainage Board. Natural Resources Wales has permissive powers to undertake maintenance works on watercourses that are designated as 'main rivers', such as the Afon Henddol. They also carry out works on adopted ditches which attract a levy paid annually by landowners and Cyngor Gwynedd. The levy covers the cost of maintenance of these adopted ditches, but the majority of ditches are not adopted and deemed maintainable privately. Natural Resources Wales have the powers to maintain all the ditches in the I.D.D, but the funding would need to be met through the local levy, which currently is only able to support the adopted system.

The ditch at Glan Y Mor historically has not been considered a flood risk to the area and did not cause any flooding in 2000, unlike Ffordd Corsen. We take a risk based approach to determine our maintenance programme with people and property being the priority. The more critical ditches might be opened annually while other ditches which do not reduce flood risk might not be maintained at all. The annual maintenance programme is reviewed annually and this can change due to flood events or visual conditional assessments for example.

11. The recent expenditure on protecting Fairbourne from the estuary costing £7,000,000 approximately was funded from where? How were the cost benefits of this scheme determined, was a formula used? The European route? Is there a risk of potential clawback within the adoption of SMP2 by Gwynedd Council? How was this very recent expenditure taken into account for SMP2?

The recent scheme was funded by Welsh Government and the European Regional Development Fund, (because of Fairbourne's location), via Environment Agency Wales/Natural Resources Wales Flood Risk Management Capital Expenditure Budget.

Inspections of the existing tidal flood defences (Fairbourne, Fegla Fawr, Mawddach and Arthog) had identified sections of defence that had deteriorated over time to be in poor condition and at real risk of breaching. In addition, the existing embankments were difficult to maintain due to the steepness of the side slopes, narrow crests and lack of access.

Failure of the tidal embankments would lead to tidal flooding of approximately 420 properties (predominantly residential) during a 1 in 200 (0.5%) Annual Exceedance Probability flood event resulting in significant risk to life. This meant that Fairbourne was ranked high in Environment Agency Wales Communities at Risk Register and resulted in it being put forward as a project.

The premise for the scheme was to minimise, as far as possible, the construction work costs. Embankments were strengthened along their existing alignment (apart from two short set back areas) and the defence heights were kept as existing and not raised.

At the time of finalising the business case for the Fairbourne Flood Risk Management Scheme (FRMS) the West of Wales Shoreline Management Plan (SMP) 2 policy for tidal flood defences along the estuary was being reviewed and had not been finalised.

The Health and Safety factors referenced above were the key drivers in Environment Agency Wales promoting the Fairbourne FRMS. However the economic justification for undertaking works was also considered in line with Treasury Rules in order to ensure that the financial benefits of undertaking works would outweigh the costs.

In order to judge the economic viability of a project we appraise it across a timespan of 100years.

The recommended draft policy within the SMP2 at the time of preparing the Business Case for the scheme was Policy 3: Continue with existing or alternative actions to manage flood risk at the current level. The draft SMP2 was promoting hold the line in Epoch 1 (over the next 20 years), managed retreat in Epoch 2 (20-50 years) and then no active intervention during Epoch 3 (50-100 years).

Therefore in order to ensure that the works provided value for money Natural Resources Wales reduced the appraisal period to 50 years and assumed that costs for a Managed Realignment of the tidal embankment would occur in yr 20 (to align with Epoch 2 policy and assume a worst case scenario). The overall effect was an increase in costs and a slight reduction in benefits. However there was still economic justification for the scheme.

Natural Resources Wales are comfortable that the decision making process was robust and that the scheme complies within the SMP2 strategy for the area.

The current final project costs are estimated to be £6 million, based on savings and not expending the risk allowance.

Natural Resources Wales are not expecting 'clawback' to be an issue on this project, but Welsh Government would be better placed to answer this question in more detail.

We feel that the information provided, fully answers the question.

12. What does relocation of Fairbourne - and its (30) businesses and (approximately 60) employees - mean? How can you ensure that businesses continue to thrive? Are Gwynedd Council planning for this now?

The Joint LDP covers the period between 2011 – 2026. During this period the SMP advocates 'Hold the Line' and a 'Managed Retreat' generic policy option for PU zones that affect Fairbourne during the time frames. The SMP emphasises that the time frames are not rigidly fixed. The length of each time frame and the transition from each one will depend on how quickly sea level rise actually occurs.

The Joint Planning Policy Unit is recommending that a Coastal Change Management Area (CCMA) be included in the LDP. The extent of this Area will be informed by the SMP. The Unit has formulated draft policies that will prevent new residential development within this Area, - an approach which will align with national planning policy. Other policies facilitate a limited range of types of development linked to the coastal area, such as cafes/ tea rooms and sites used for holiday or sites used for holiday or touring caravans and camping – subject to compliance with criteria, which could mean that planning mechanisms will be used to manage the life of a development, i.e. time-limited planning permissions. In all cases, and particularly in relation to development that involves people staying in caravans or tents or other holiday structures, regard will have to be had to policies on development and flood risk. If there are existing static, touring or camping sites in the area, policy in the emerging draft LDP facilitates the relocation of these sites to suitable sites outside the Area. The LDP will not identify alternative sites. Such proposals will be subject to the relevant policies in the Plan, e.g. those that deal with impact on the landscape, sensitive sites, highway network, etc.

Where extensions or alterations to existing businesses or residential properties are proposed that are likely to increase the scale of the property and the number of occupants at risk, particularly in houses, consideration would need to be given to the impact on the area at risk and whether the degree of harm is acceptable. Some extensions or alterations to residential properties are permitted development, i.e. they do not require planning permission. The Council will be considering whether to remove the permitted development rights, thus ensuring that it is aware of all proposed extensions and alterations and are able to manage change. The detailed policies that will apply to the CCMA will be set out in the Deposit LDP. It is anticipated that the Joint Planning Policy Committee will approve the Deposit LDP for public consultation on the 18th December 2014. It is currently anticipated that the statutory public consultation period will take place during February and March 2015. Details of the consultation period and how to get involved will be published nearer the date. In the meantime interested parties can view the draft Deposit LDP on the Joint Planning Policy Committee pages at:

[https://www.gwynedd.gov.uk/en/Council/Councillors-and-committees/Meetings,-minutes-and-agendas/Meetings,-minutes-and-agendas.aspx?pwyllogor=/2014-15/Pwyllogor Polisi Cynllunio ar y Cyd_Joint Planning Policy Committee/2014-12-18](https://www.gwynedd.gov.uk/en/Council/Councillors-and-committees/Meetings,-minutes-and-agendas/Meetings,-minutes-and-agendas.aspx?pwyllogor=/2014-15/Pwyllogor%20Polisi%20Cynllunio%20ar%20y%20Cyd_Joint%20Planning%20Policy%20Committee/2014-12-18)

13. There is a housing shortage so how will Gwynedd Council ensure there is adequate housing for the relocation? Will people have to be relocated within Gwynedd? How much flexibility will they be allowed?

At present in terms of the LDP's Housing Strategy, the Joint Planning Policy Unit is aware of two possible scenarios, namely (a) that households (existing and new) will continue to want to live in

existing properties Fairbourne during the Plan period (2011 – 2026), and (b) phased relocation of existing households during the Plan period.

In terms of the first scenario, a housing growth level was agreed to by the Council in 2013 for public consultation. Comments about the proposed growth level have been considered as well as up to date evidence about the need/ demand for housing in the Plan area. The Joint Planning Policy Committee will be considering the results of this work on the 18th December 2014 when it considers the Deposit LDP. The Council currently aims to proportionately distribute the new housing units required in the Plan area according to the role of settlements as set out in the emerging Joint LDP. Therefore, a specific ‘target’ is set for each defined settlement. The draft Deposit LDP does not propose to facilitate any new housing units in Fairbourne. Nonetheless there are existing historic planning consents for new housing in Fairbourne, which fall outside the remit of the emerging Plan. .

The question, however, suggests that the second scenario would need to be planned for, i.e. that existing households would need to be relocated. This scenario would mean that existing housing units would be left unoccupied and therefore, there would be a demand for new housing units in excess of the number that would be usually directed to a settlement of Fairbourne’s size/ role. At present the Joint Planning Policy Unit isn’t aware of any firm evidence that confirms that there is a need to identify specific sites in alternative settlements to accommodate the relocation of some or all the existing households in Fairbourne during the Plan period. The draft Deposit LDP includes a rural exceptions sites policy that facilitates the development of additional housing units in or adjoining settlements where general market housing would normally be refused. This policy would apply to settlements such as Tywyn and Barmouth. Once adopted (anticipated December 2016) the LDP will be formally monitored on annual basis and a full review will be undertaken every four years. Should firm evidence about the requirement for a significant relocation of residential properties from Fairbourne be presented the Joint Planning Policy Unit together with the National Park Planning Authority would seek to formulate a policy that could facilitate a solution.

14. How will Gwynedd Council support those members of the community whose care package either now, or in the future, is dependent upon an assessment which includes the saleable value of their property?

If you cannot sell your house: For Residential/Nursing care only. If a service user owns a property, the value of the property is taken into consideration. The value of the property is added to any other capital that the service user may possess. If the service user’s total capital is in excess of the capital limit the service user will be assessed to pay the full cost for their care. The value of a property is initially determined by a professional valuation. This may or may not change dependent on the final sale value of the property. If the final sale value of the property is less than originally estimated, then this will reduce the capital figure used in the financial assessment. Consequently this may reduce the amount that the service user may have to pay towards the cost of their care. If a property has no value, it will be disregarded in the financial means assessment.

What if the amount of debt (or bill) you’d ‘accrued’ whilst being in care, couldn’t be realised from your estate upon your death? Does the debt pass onto your children? As above. If there is an outstanding debt for care and this has accrued in relation to the value of a property, the total figure of the debt may have to be revised dependent on the final sale value of the property. A deceased person’s debt is payable from their estate **not by their children**.

How will the bill for your care be paid upon your death? By the executor of the estate, from the funds held in the estate.

What if you die in probate? The executor would apply for probate after a service user has died

15. How is Gwynedd Council going to support the vulnerable within our community who are distressed and worried now as a result of the adoption of this policy by Gwynedd Council? And as the process moves forward?

The updated SMP, based on existing evidence, has emphasised that at present and over the next 40 years we can defend and that we should defend. This will need to be reviewed as more information about sea level rise is obtained. The community is currently working with Natural Resources Wales to review and re-establish the Community Flood Warden role and this will be effective from January 2015. In addition to this, Community Council are working with other agencies in developing an emergency plan should very exceptional storm conditions be predicted. This will be co-ordinated with flood warnings, as at present. The plan will be discussed and the community will be involved and kept aware.

The project recognises, however, that different individuals, depending on their circumstance, will be vulnerable in different ways to longer term change. To ensure we are addressing any areas of concern, the Project Board and Working Group will work closely with Fairbourne Facing Change and the community council to ensure that any worries or concerns from the community are raised in good time, in order for the project to address these issues and find suitable solutions.

The Socio/Economic Consequences of Climate Change Task/Finish group has already completed a piece of work to identify any rise in anxiety or depression-related illnesses across Fairbourne and has found that there has been no increase to-date.

16. The SMP situation was known for some years yet people have still been able to purchase properties in Fairbourne. Why, when ultimately the property is worthless? Likewise why have Gwynedd Council allowed more properties to be built and invested in through development?

The Local Planning Authority has no control over the sale of properties. There is no question about the status of land or properties in the SMP on the Land Charges.

A number of sites in and around Fairbourne have the benefit of extant historic planning consents, ie, planning permission was granted some time ago but the permission remains extant as a 'material start' has occurred. Apart from consent given in 2012 for the conversion of a first floor property to residential use, all extant planning consent and implemented planning consents pre-date the adopted Unitary Development Plan, TAN15 and the baseline date for SMP2. Planning applications are now assessed against the requirements of Policy B29 in the adopted Unitary Development Plan as well as national planning policy and guidance.

17. When you did extensive consultation for the embankment on the estuary flooding it was made very clear by the then Environment Agency that Fairbourne was not at risk from flooding from the sea. What has changed?

Throughout the consultation for the recent scheme Natural Resources Wales stressed that the potential for greatest risk to Fairbourne was from the sea. There was an initial perception within the community that the main risk to the village was fluvial flooding from the watercourses. Whilst there is a fluvial risk, the consultation stressed the tidal risk implications to the village and hence the justification for the scheme, with the potential to impact approximately 420 properties tidally with 28 at risk fluvially.

Since the Sea wall and tidal embankments were built at Fairbourne back in 1976 the village has benefitted from a 1:200 standard of protection to flooding from the sea. The recent flood scheme has not increased the level of protection from the Sea but refurbished to maintain the level of performance by reducing the likelihood of breach which is the main threat to Fairbourne rather than overtopping. It was the condition of the sea defences that instigated the coastal improvements rather than the level of protection.

18. In your Frequently Asked Questions it says SMP2 emphasises that over the next 40 years you 'can and should defend' Fairbourne. Can you clarify the use of the word 'should' as opposed to the word 'will'? If severe weather causes a flooding event will the policy of defend continue?

Welsh Government has an annual budget for flood and coastal erosion risk management in Wales, this is supplemented on occasions by European money and other funds. Each of the 22 Unitary Authorities in Wales have to bid for grant aid for any plan or project which they wish to promote. The SMP sets the recommended approach to risk management now and into the future, importantly setting the high level approach and intent of management. This will be taken into account by Welsh Government and is essential technical support when operating authorities (the Councils and NRW) submit projects for funding. In defining the intent to defend Fairbourne over the next 40 years, this will support Gwynedd Council's application for grant aid to fund works that may be required.

During the 40 years, the intent would be to repair defences and address flood risk issues arising from extreme events. As we move towards the end of this period there would be the need to review what specific actions might be required. This will critically depend upon sea level rise and upon associated actions developed through the project.

19. When Gwynedd Council adopted the SMP2 plan, why was this not communicated to the community? The Council has a duty of care to its residents. Surely further effort should have been made to consult with the wider community?

The SMP sets out a recommended approach to management in terms of policy. It also sets out an action plan necessary to address the issues raised by the recommended policy. In adopting the findings of the SMP, the Council also accepted the need for the action plan. One could not be

adopted without the other. The SMP Action Plan for Fairbourne made recommendations for establishing a project to further investigate the issues and to develop further the consultation with the community. Setting up the project board and developing how this would be taken forward with the community has been a priority for the Council. As discussed at the meeting on the 25th April, this has not been a straightforward process. Many lessons have been learnt, particularly in understanding how best to communicate with the whole community. It is important that the project group takes this forward positively.

20. Why when we need more affordable housing should we allow 400 decent houses to be swallowed by the sea? Wouldn't extra sea defences be cheaper?

As explained earlier, in the longer term, it will be harder technically to maintain an acceptable standard of defence. While it is possible to build defences higher, install pumps and manage the erosion, this would incur very significant cost, with on-going increase in costs. Furthermore, in attempting to defend people in the future, this risk is such that should defences be overtopped or, worse still, breached then the consequences would be immense and put people's lives at risk.

At present, Fairbourne does provide an important and valuable housing stock. In the future there would be greater and greater reliance on defences. We need to plan how we adapt to a future where Gwynedd's housing stock is maintained in a sustainable manner.

21. How will the Welsh Government determine their support, or otherwise, for decisions on abandoning partially or totally established communities? Will decisions be based upon competitive bidding for limited resources?

With reference to Q3 local authorities have to make a bid for grant for any plan or project they wish to promote. The mechanism for Welsh Government support will be through the operating authorities, NRW and/or Gwynedd Council.

22. Has the impact of silting up of the estuary and the benefits of dredging been explored?

Dredging can have limited benefits when dealing with rivers by providing extra capacity regarding flow and storage because of the finite volume of water being considered. The sea has, in effect, an infinite volume and therefore, dredging would have no benefit with regard to flood risk to Fairbourne.

23. What is saved by allowing Fairbourne to flood in terms of ongoing maintenance costs? Does it protect Barmouth and Dolgellau?

Further details of current maintenance will be provided in due course. The sustainability of defences at Fairbourne are not however determined by the on-going maintenance requirement

but rather by the need, in the future, for major capital improvements to maintain standards of defence in face of sea level rise and climate change. Certainly there is no suggestion that a decision not to defend Fairbourne would be to allow better defence at Barmouth or Dolgellau.

There is no consideration of direct flood risk benefit to either Barmouth or Dolgellau in considering Fairbourne's future. Any decisions made as to flood risk either from the sea or fluvially in Fairbourne will be based on the conditions and the sustainability of the existing defences. There is no long term significant maintenance savings by not carrying out annual maintenance. As far as Natural Resources Wales are concerned there is currently no intention to curtail the maintenance programme. In fact we are currently working with landowners to improve localised drainage at a known problem area behind Penrhyn Drive South.

24. Where does the money from fuel tax go? Supposedly climate change!?

Significant investment is being made at a national level in addressing and researching issues of climate change. However, research strongly indicates that even if the causes of climate change were addressed sea level rise will continue in the future.

25. We understand that improvements to defences at Friog are being explored. Could you tell us precisely what these improvements are and what budget has been identified to support them? Are you looking for solutions that have proven successful in other parts of the world?

The recent storms led to undermining and subsequent damage to a section of the sea wall at Friog corner. This resulted in emergency works being carried out and the importation of 900 tonnes of rock armour to make good the damage. The action stabilised the damaged area and monitoring confirms this to still be the case.

Natural Resources Wales has secured initial funding to investigate the potential for any betterment in stabilising the damaged section through investigating the coastal processes, and the potential to maximise natural processes as part of the defence for example, a groyne trap may maximise gravel/shingle retention at this corner. As part of the process, enquiries will be made to identify any similar issues elsewhere and options that have been considered previously.

The initial works to maintain the integrity of the defences at Friog are now complete.

We have now secured a budget and engaged a consultant to carry out a study at Friog and the remaining foreshore which includes a comprehensive brief based on the assessment of the current defences, beach processes and options for the future to secure the frontage.

26. There are concerns regarding the actual flood plan. What is it? Should there be a mechanical alarm in place? Who is responsible for raising the alarm if the sea wall is breached? What happens to residents who are 'bed ridden', have mobility problems or are ill? What about the children? What is the plan for rescue and evacuation? Do flood wardens get training? Are flood wardens covered by the Council's insurance?

Although major flooding might be rare, we need to plan for such an event to ensure that people are safe. An emergency plan is being developed through the Community Council. This is will form an important element considered by the Project. This is being discussed by the Task and Finish Group – Emergency Response Plans.

Fairbourne Community Flood Plan - We have now reviewed the position of the existing Community Flood Plan and have decided jointly with Arthog Community Council to revisit the plan and recruit further flood wardens.

A meeting took place on the 18 November whereby Eirian Redmayne from Natural Resources Wales was invited to go along to Fairbourne to give a presentation to those interested to become wardens to explain further about the Plan and the role of the flood warden. Mike Scott of Arthog Community Council led the meeting.

Following this meeting, further numbers of wardens have signed up and the next step will be to arrange a further meeting in Fairbourne to provide the new wardens with further training and to populate the plan further.

What is a Community Flood Plan – A Flood Plan is a document that provides good communication link between Natural Resources Wales, Local Authority, Emergency Services and flood wardens prior, during, and after warnings are issued.

The Plan provides information on all 421 properties at risk and explains the procedure of each organisation when warnings are issued. It also provides information on setting up a Forward Command Post which is usually set up when a flood warning is issued, and is attended by Natural Resources Wales/Local Authority, Emergency Services and a representative of the Flood Warden Group. This group will coordinate the response to a flood event which will include discussions and planning of the evacuation process which is lead by North Wales Police. In some Communities, flood wardens will gather information from their allocated areas of vulnerable residents which can be shared during this meeting.

What is a Flood Warden – the flood warden acts as the link between Natural Resources Wales, Local Authority and the residents and they will encourage residents to take action to prepare for a flood by ensuring that they are registered to receive flood warnings, and better understand what the warnings mean so that appropriate action can be taken.

Each warden will have their allocated area within the Community and will visit each property in their area to promote the flood warning service.

They will gather, if in agreement, a record on vulnerable residents which will be shared and coordinated with the Senior flood warden or his/her deputy with the Police and Local Authority at times of evacuation.

The Flood Warden role is a volunteering role, and it's purely a communication role between the community and other wardens. There will be a Senior Flood Warden and assistant appointed who will lead on the plan and communicate as necessary with organisations when warnings are issued as set up in the plan.

They will meet up as agreed with the Senior Flood Warden and arrange way forward with the community. They will also instruct Natural Resources Wales when changes are made to the Community Flood Plan.

It is important to note that Flood Wardens must not:-

Take any actions that could endanger their personal safety, or the safety of the general public

Carry out the job of the emergency services - they are trained professionals with the correct equipment and understanding of their role e.g. getting involved in rescues

Enter floodwater – remember just 15cm (6 inches) of fast flowing water can sweep you off your feet. Floodwater displaces manhole covers and hides other dangerous obstructions.

Attempt to use vehicles in areas of flood water

***Rest Centres** – they are set up by the local authority who have their own plans. All relevant organisations will be informed of the set up of the rest centres.*

27. Why have the Welsh Government and Gwynedd Council not clarified and promoted an accurate view of the situation in Fairbourne? Is there a hidden agenda?

The SMP has been produced using the best available data to look into the future and determine how best to manage the coastline knowing that sea levels are rising. There is uncertainty regarding how quickly and by how much sea level is going to rise but it is clear that change will occur. There is no hidden agenda, the whole process has been open and transparent.

28. How will Gwynedd Council support the community in dealing with the detrimental effects on the village including developing health and well-being issues?

The Working Group (formerly Socio/Economic Effects of Climate Change Task/Finish Group) will address any matters relating to health and well-being issues caused by the Shoreline Management Plan. Members of Fairbourne Facing Change hold a seat on this working group and will be the link between the community and the Working Group/Project in order to communicate any issues which need to be addressed. Should any member of the community not want to liaise with Fairbourne Facing Change members, they can contact a member of the Working Group via: www.fairbourne.info where telephone numbers, email addresses and a 'contact me' form, can be found.

29. If managed retreat takes place will the village be relocated together? Will a new village community be built for the residents? Where will it be? What will happen if anyone refuses to sell up? With 50 communities facing managed retreat will there be enough land for relocation to take place and who will fund it? Who will make the final decision – Gwynedd Council, the Welsh Government or the UK Government?

What does make Fairbourne different to many other areas is that the whole area of the village is built at this low level. There are no significant areas of high ground, major flooding would affect the whole village. The implications of this are being considered by the project. There will be impacts on other communities and the Council are working with these communities in considering their needs as well. This larger picture will be addressed through this process. At this time no fixed plans are in place. It is essential that the community are involved in this task, alongside other agencies.

At the last Project Board Meeting, it was decided that work needs to start to help us understand what the village may look like in the future. In order to do this, it was decided that a small workgroup be formed to undertake an 'Options Appraisal' exercise. Throughout this Options Appraisal, questions such as this can be addressed. This workgroup has not met up as yet, however, once it has been established and work is 'in progress' updates will be available.

30. Is there a possibility of the village bulk buying specific home protection?

At this stage it is considered impractical to address the long term risk through local, specific home protection to individual buildings. This is a task that should be undertaken by the community itself.

31. What plans will be implemented to prevent the village from becoming a ghost town?

At the last Project Board Meeting, it was decided that work needs to start to help us understand what the village may look like in the future. In order to do this, it was decided that a small workgroup be formed to undertake an 'Options Appraisal' exercise. Throughout this Options Appraisal, questions such as this can be addressed. This workgroup has not met up as yet, however, once it has been established and work is 'in progress' updates will be available.

32. How will the village be policed to prevent vandalism and property crime?

At the last Project Board Meeting, it was decided that work needs to start to help us understand what the village may look like in the future. In order to do this, it was decided that a small workgroup be formed to undertake an 'Options Appraisal' exercise. Throughout this Options Appraisal, questions such as this can be addressed. This workgroup has not met up as yet, however, once it has been established and work is 'in progress' updates will be available.

33. Do any elected representatives live in any of the areas identified for managed realignment?

Yes, we have identified at least eight Gwynedd Council members who live in a Ward which is subject to managed realignment.

34. Do Gwynedd Council think that the SMP2 has the wellbeing of the villagers at heart? In its implementation of the SMP2 does the Council intend to have the wellbeing of the community at its heart? If 'yes' how? If 'no' what next?

Yes, in part by making residents aware of possible future scenarios and the risk they face. However, possibly as importantly, in engaging the community as to how we address the concerns being expressed. The SMP highlights the longer term risk to the community and to individuals and aims to explain the difficulty in keeping people safe in the longer term due to sea level rise. Change has to happen, it is essential that the project draws upon the knowledge of the community and works with the community in developing long term solutions that reduce the risks associated with very difficult situation being faced.

As part of the Workgroup (mentioned in Q28) and the Options Appraisal project (Q31) any issues relating to the wellbeing of the community in conjunction with the Shoreline Management Plan, will be addressed, as and when appropriate.

35. What is Gwynedd Council going to do now that they have put people who need to move unable to realise their investments? How are they going to remedy this situation to the satisfaction of residents?

This issue was discussed at the meeting on the 25th April 2014. It was identified that there has been some research looking at house prices and how these are affected. This, however, has to be examined further through the project. As requested by the community, the Council have prepared a note setting out the findings of the SMP. It is important that all involved are able to base their decisions upon a clear understanding of the policy. This will continue to be discussed as part of the Project Workgroup, referred to previously.

36. The Council is prepared to pay 'housing benefit' – which, if all residents from Fairbourne were re-housed in private accommodation, could equate to somewhere in the region of £3,000,000 per annum, would this substantial amount of public money be better used to compensate people who need to move house each year – in all a better, and more humane outcome? Wouldn't the Council be better looking for more innovative ways of dealing with the problem they have created, rather than expecting us to walk away from our investments?

The problem being faced is as a result of the threat of future sea level rise. The Project will consider and investigate this question more fully and will raise this issue with Welsh Government.

After discussion at the Project Board and the Property Values, Insurance and Planning Policy Task/Finish Group, it was decided to apply for funding from the Welsh Government to undertake a Feasibility Study into a Buy to Let Scheme for Fairbourne. We are currently awaiting funding for this project, however, if successful, it will be run as a separate project to the Workgroup and Task/Finish Group. Further information relating to this will be released as and when available.

37. As Gwynedd Council points out there are measures in place to enable flood risk properties to get insurance but insurance premiums will increase probably beyond the pockets of local people and in turn become unaffordable. The Council and SMP2 has exacerbated the insurance position. What does the Council intend to do about this?

The insurance industry has, for over a decade, been using information published by the Environment Agency regarding flood risk. Many people have reported having difficulty obtaining insurance before SMP2 as a result of the 2004 Flood Maps. This will be monitored through the project. The Water Act 2014 will address availability and affordability of insurance.

Further to the Task and Finish Group – Property Values, Insurance and Planning Policy, Natural Resources Wales have stated that if any homeowner requires a statement to produce to their insurance company to demonstrate that their home is not currently affected by flooding, then please get in touch with them via the Project Workgroup.

38. It appears that Gwynedd Council have failed in its 'Duty of Care' to residents of Fairbourne. How does the Council feel about the potential claims for 'Personal Injury' due to ill health and trauma caused by their negligent way of dealing with the situation?

The SMP has been developed in line with the SMP Guidance. The findings of the SMP and its recommendations in terms of the SMP Action Plan had been considered and approved by the Technical Steering Group and the Client Steering Group. Following approval by the operating authorities the SMP was signed off by the national Quality Review Group (QRG).

The Council's decision to accept the findings of the SMP and approve taking forward implementation of the plan (as set out in the Action Plan) was timely and necessary to start addressing the issues raised by the SMP. It was based on the information provided in the SMP document. The Action Plan which highlights the need to develop an adaption strategy has been agreed by Gwynedd Council and its development, involving the Fairbourne Community, is ongoing. This is being discussed by the Working Group (formerly the Task and Finish Group – Socio/Economic Consequences of Climate Change).

39. Have the other 49 areas been better advised than we have about their predicament or will it be left to the media?

There will have been an opportunity for all coastal areas to comment on the draft SMP2 during the consultation process. Gwynedd Council have embarked on long term programme of raising awareness and generating capacity in communities to understand and discuss their future. Gwynedd Council are believed to be the only local authority in Wales to have proactively visited every coastal City, Town and Community Council to explain the impacts of SMP2 policy.

40. As an alternative to the untenable situation Fairbourne is at present placed in, would it not be better for the Council to adopt a 'wait and see' approach – with the promise of compensation, if and when, this event ever happens? This would then release residents to sell their homes with the guarantee of compensation in the future – and if we can still acquire insurance then we could claim on our insurance policies. This would be of no initial cost to the Council but if the Council wants to implement the SMP2 and remove residents from Fairbourne then the only humanitarian thing to do is buy their homes at current market values (pre SMP2 market values) – not devalued market values. How does the Council feel about this suggestion?

At present there are no measures in place for this. Council support for 'relocation' would probably be limited to help with finding a private sector property to rent and with applying for housing benefit. There is a national debate over this. The Project will consider and investigate this more fully and will raise this issue with Welsh Government. In other areas of the country, in particular on the east coast of England, the ideas of purchase and lease back have been looked at. This along with other ideas will be considered through the Project via the Working Group (formerly Task and Finish Group – Property Values, Insurance and Planning Policy).

41. Can you explain precisely what you intend to monitor over the next 5 years? Will we be kept informed of the progress and monitoring? Will you also be undertaking an in-depth study in light of the recent real storm event and its impact on the affected communities? Shouldn't this trigger a review of the SMP2?

A monitoring programme will be established to monitor 3 main elements, they are:

- *Ground water*
- *Shingle bank volume*
- *Intertidal beach level*

The programme will be established and refined, depending on results, during the first 5 years with a view to continue monitoring for the next 30 to 40 years. This information will build on the monitoring data gathered over the last 22 years. Monitoring results and analysis will be published annually.

The Wales Coastal Flooding Review Phase 2 was published by Natural Resources Wales on 1 May 2014. Recommendation 41 refers to SMP2 and is inserted in full below.

Welsh Government should endorse the strategic framework established by the Shoreline Management Plans (SMP2). This should be accompanied by more national and local support to communities and community involvement in the development of local adaptation options and plans.

Develop a 'local adaptation toolkit' to better support communities. This may include technical guidance, templates, and engagement and communication tools and policy positions. Local discussions in all coastal communities need to begin now, involving professional partners and the community. These discussions should consider communities on a risk basis. These discussions need to explore and develop local plans to adapt and increase resilience over time.

Support and draw upon the experience of the Fairbourne multi-agency group to help inform adaptation and community resilience discussions at other locations.

Monitoring is the process of measuring physical change in such a way that it can be repeated an infinite number of times over a prolonged period. When a number of measurements have been collected it will be possible to carry out analysis of the data to quantify the change and extrapolate the rate of change into the future.

The three elements being measured are:

Ground water – *this will entail installing boreholes to measure and record the level of the water table underground.*

Shingle bank – *is the measurement by laser scanning of the change in volume of the shingle bank. This is done by comparing the latest survey with previous surveys to identify and quantify change. The first laser scan survey was carried out in October.*

Intertidal beach – *is the measurement by topographic surveying of the amount of sand on the beach when the tide is out. Again we will be able to identify and quantify change. The first topographic survey was carried in October so that data regarding the sand and shingle were captured the same time.*

An in-depth study of the impact of recent storms on the affected communities will not be undertaken as part of the monitoring programme . The impact of recent storms will not trigger a review of the SMP2.

42. Anecdotal evidence indicates significant silting up of the Mawddach Estuary. Is this being monitored? Has the impact of the new Barmouth seawall been assessed?

The Mawddach Estuary is referred to as a sink because material is accumulating in the estuary and has been doing so since the last ice age 14,000 years ago. This accumulation of material also created the land Fairbourne is founded on today. This process will continue until an equilibrium state is achieved and the process is reversed and material is lost from the estuary. It

is impossible to say when or indeed if an equilibrium state will ever be achieved because of the effects of climate change.

Gwynedd Council do not monitor the siltation in the Mawddach Estuary. However there is a data set of aerial photographs which can indicate the changes which have occurred over the years. Aerial surveying using LiDAR is being used more frequently these days and the latest was undertaken by The Wales Coastal Monitoring Centre in April 2014.

I assume that the new sea wall referred to is the causeway constructed between the mainland and Ynys y Brawd in the early 1970's to close the north channel into the estuary. One of the main reasons for closing the channel was public safety because of numerous drowning incidents but there is also evidence to suggest that the channel was closing naturally and the causeway just accelerated the process.

The silting of the estuary is a natural process with each tide carrying a load of suspended sediment into the estuary of which a small percentage settles out and is deposited on the sea/river bed. which has accumulated to a depth over 50m by today, a rate of less than 5mm per annum. There is no evidence to indicate that the causeway has had a detrimental effect on the siltation of the estuary. The causeway is only the latest episode in a catalogue of anthropogenic interventions which have changed the characteristics of the estuary. The catalogue includes:

- *Fixing the estuary mouth by Trwyn y Gwaith.*
- *Constructing the railway viaduct in the 1860's.*
- *Land reclamation along the length of the estuary including where Fairbourne is now.*
- *Constructing the causeway in early 1970's.*
- *The placing of reno mattresses under the railway viaduct in the 1980's.*

There is no evidence to link the current flood risk facing Fairbourne with estuary siltation and the construction of the causeway.

43. What is the Council's intention regarding the potential to charge second home owners double rates? If the Council do decide to take this action will they look at the possibility of making an exemption for Fairbourne in light of the recognised current difficulties of selling property within the community?

This will be raised with the appropriate departments within Gwynedd Council and the Project Board will provide a response as and when one is communicated to them.

44. What program of Storm Drain Maintenance is intended for the village? Will NRW publish a map of adopted and non-adopted drainage ditches and water courses and how will any lack of maintenance on non-adopted drainage ditches impact on the risk of flooding?

Fairbourne is within the Internal Drainage District (IDD), so we have permissive power on all watercourses, not just those which have been nominally "adopted" so a map of adopted watercourses is not totally relevant.

We will carry out channel maintenance on the Main River system leading down to the tidal doors in December/January together with the non-main river ditches that we normally clear.

We will monitor the system for blockages and ensure that the grids are kept clear on a regular basis.

There is no scaling down of maintenance planned, in fact with the new scheme there will probably be an increase in maintenance. This is the first year, so we don't have experience of what is required yet.

There is certainly no cut back which might increase flood risk to the village.

A project to review IDD's may change the way adopted ditch maintenance is handled, but Main River works are unlikely to change.

45. Will pebbles and stones displaced in the storms be returned to the appropriate areas on the beach and shingle bank?

The shingle bank referred to does not belong to Natural Resources Wales (NRW) it is Crown Estate Land mostly bordering land owned by Gwynedd Council on which sits the Concrete Sea Wall that NRW maintains. The rock armour at Friog Corner is to sustain the Concrete Sea Wall.

The question of shingle at Friog corner which we answered earlier under Q52 of the FAQs still stands as Gwynedd Council's beach monitoring and NRW's Friog Corner study will identify options which may include shingle nourishment which would be considered for further assessment. NRW would be involved in any shingle management essential to maintain the concrete sea wall and Flood risk in the community, but not clearing up of shingle washed over onto the path/road walking unless a direct flood risk management issue has been identified. NRW thinks that debris was cleared during a previous storm by Gwynedd Council; perhaps their maritime team?

46. There is significant concern from the Community regarding 2 areas in the Rowan Embankment where the shingle has been washed out opposite Penhryn Drive South. This is leaving the Embankment in both areas vulnerable to over-topping during high tides and storms. Are the relevant agencies aware of this and what plans do they have to rectify the situation?

Natural Resources Wales are aware of the concerns however the integrity of the sea wall is not compromised and the shingle bank has been profiled naturally by sea wave action. We will continue to monitor the situation together with Gwynedd Council, who have already undertaken beach profile studies and this is also covered within the contents of the brief for NRW's proposed Study of Friog Corner. There is no evidence as yet that this will exasperate the splashover.

The local action undertaken on the access has inevitably cut off the splashover flood route to the properties affected during the January storm. An improved flood warning service will also provide a more specific warning to residents along the frontage.

47. Have the relevant agencies given consideration to using movable interlocking concrete barriers, similar to temporary motorway interlocking central reservations, that can be placed at risk areas during winter and removed when not needed?

Is this referring to the provision of a secondary defence behind the existing sea defence? If so, then we would not currently consider this option as it may accumulate more water behind the defence rather than let it seep away. This is something that Natural Resources Wales could discuss further with the Fairbourne Facing Change Action Group.

48. What have the relevant agencies done about getting the media to retract/correct the erroneous statements made during the “Week In Week Out” television program and other coverage?

A further Week In, Week Out programme has since been broadcast and has portrayed Fairbourne in a much better light. However, work continues through the project Working Group, to challenge negative future negative press. It should be understood however, that the press does have freedom of speech and despite all stakeholders providing truthful and honest accounts of the current situation, the press are at liberty to print what they see fit.

49. There is ongoing concern about the precarious position of some of the Dragon's Teeth. What has been done by the relevant agencies regarding the risk assessment associated with this and the need for ongoing monitoring?

The shingle that had been thrown over the flood wall during the storm was cleared up and returned to the beach in April 2014. At the same time each of the dragons’ teeth which had been displaced was checked for stability and utilising the plant available any dragons tooth which could topple over was stabilised. It is not known if any further inspections have been carried out.

50. Could the relevant agencies tell us where the commitment to defend Fairbourne for the next 40 years is reflected in official policy decisions? How will this be reflected in order to satisfy solicitors' requests?

The estimated figure of 40 years is based upon current scientific information available to us and ongoing monitoring.

51. It is understood that spoil from weir clearing and from the bridge over Afon Wnion in Dollgellau has been used for a number of years to build up defences along Afon Mawddach on both sides at Bontddu and Penmaenpool. Has this work been authorised and is the impact of flows during high rainfall events monitored?

Gravel from Pont Fawr Dolgellau was taken to the Ynys floodbank at Penmaenpool some fifteen years ago and is not to be confused with material which went to many locations on the floodplain as part of the recent Gelligemlyn road improvement scheme. The gravels were utilised behind the embankment to strengthen identified weak sections maintainable by our then predecessors Environment Agency Wales which was fully assessed. No further gravels have been used for this purpose and have since been disposed of at various other locations to include Friog corner. The material recently imported from the road scheme has been assessed to have no detriment to Fairbourne.

52. Will the relevant agencies consider/commit to the replacement of pebbles and shingle at Friog corner and surround?

This decision will come as a result of both Gwynedd's monitoring process and the outputs from NRW's Friog study.

53. At what point will a decision be taken, and by whom, to maintain the Cambrian Coast Railway and remove the uncertainty about its long term future?

As yet, we have been unable to meet with the relevant parties to discuss this matter, despite several attempts to do so. As soon as we have a response to this matter, it will be communicated via the Project Board.

54. With regard to the Fluvial Defence Scheme, was the European Funding Body aware that NRW "reduced the appraisal period to 50 years and assumed that costs for a Managed Realignment of the tidal embankment would occur in year 20"?

No, the European Funding Body would not look into the detail of the appraisal completed and would not be aware of the various tests and sensitivity checks completed when establishing the preferred option for addressing flood risk.

This exercise was completed as a check to establish that the planned works to defend Fairbourne from the tide were cost beneficial and viable, even if future change occurred. The results were positive and thus gave re-assurance that progressing with works at Fairbourne was the correct thing to do economically.

The following questions were submitted by Fairbourne Facing Change in January 2015 and a response to these is now provided as an addendum to the Frequently Asked Questions issued in February 2015.

55. SMP2 states that it is in line with the Government's 'sustainable development principles'. One of these principles is "achieving a sustainable economy", which says the following:

"Building a strong, stable and sustainable economy which provides prosperity and opportunities for all, and in which environmental and social costs fall onto those who impose them (polluter pays), and efficient resource use is incentivised."

Considering SMP2 states for Mawddach Entrance South that 'despite significant potential benefits, long term defence is not considered to be sustainable', and the prime reason for this is sea level rise, then it appears that the home owners and residents of Fairbourne are paying the price of the pollutant industries that have resulted in the predicted sea level rise.

As the above clearly demonstrates that SMP2 has not followed the principles by which it states it has, when will SMP2, in its current state, be withdrawn and re-written?

The question raises two important and complex issues: whether the SMP has been developed in line with the Government's principles of "sustainable development" and, the second, the degree to which the home owners and residents of Fairbourne are paying the price of actions by others. These issues are recognised as being interrelated. However, in providing a response each is considered separately as one refers to the validity of the SMP, while the other relates more to how the challenges are being taken forward.

In the response to the first issue on the principles of sustainable development, the question quite correctly quotes one of the core five principles set out by Government in 2005. However, this has to be considered in relation to all the principles as a whole. From this view point the principles set out to achieve "a strong, healthy and just society" recognising the need to "live within environmental limits". The aim is to create a strong society with a view to the future; one where we are not reliant on greater and greater investment in things such as flood defence and where we are not just passing on problems that society will have to pick up in the future. These two principles are underpinned by the aim to "achieve a sustainable economy" (the principle quoted in the question), based on "sound science" and promoted by "sound governance". The concept of sustainability, therefore, recognises the need to balance all these principles. This is the approach that has been taken in developing the SMP.

The SMP identified the serious challenges faced at Fairbourne. It states that at present there are significant benefits that need to be protected. This is why the SMP argues for the need to maintain and improve defence in the short to medium term. However, the SMP has also identified that in the future, to continue to defend the village will become increasingly difficult. At some point in the future, even with defences in place, the community is at greater and greater risk and is increasingly vulnerable. At some point there will need to be a change; the approach to risk management becomes unsustainable. Based on existing projections of sea level

rise and increased rainfall due to climate change, this critical point would be reached when sea level rises by around 0.5m.

One of the underlying principles of sustainability and, indeed of the SMP, is that we acknowledge the need for change and that we plan for such change now; that we do not walk blindly in to the future, leaving future generations to face these challenges when there is much less time to plan.

In relation to the second part of the question, the Defra Guidance on the development of SMPs states "Operating authorities, local government and national government do not have a duty to provide protection against flooding or erosion. Nor is there any reason to assume that this will change in the future or that individual losses would be compensated for from public funds. However, operating authorities should work with other relevant authorities and the Government to assess the effects and promote community confidence where new (or improved defences) cannot be provided in the future."

In taking forward the SMP, the Fairbourne project has engaged with Welsh Government in examining these important issues. It is only through identifying the problem through the SMP that this has been possible, dealing with the difficult but very real issues that are presented by climate change and sea level rise.

56. SMP2 states that it will cost an estimated £25m (£90.7m PVD (discounted present value)) to abandon Fairbourne over the next 100 years, where the majority of the £25m, £23.5m, is to pay for the relocation of the Fairbourne community in Epoch 3. The "achieving a sustainable economy" government principle implies that costs should not fall upon community of Fairbourne. The cost of Fairbourne's properties at today's values (not PVD) is approximately £60m, which is significantly greater than £25m.

This shows that the recommendation that the protection of Fairbourne is not sustainable has been made using inaccurate economic data. If accurate economic data is used then it may be the case that sustaining Fairbourne in the longer term is the best way forward both economically, environmentally and for the good of the community. Considering this, when will SMP2, in its current state, be withdrawn and re-written?

Unfortunately the values quoted in the above, apparently taken from the SMP, Appendix F – Economic appraisal, have been misinterpreted and, therefore incorrectly reported in the question.-

The values reported in the SMP refer to potential flood damages, determined using standard damage values as discussed in section F3 of the Appendix. No reference is made in the SMP to the cost of relocation. Therefore, while the total estimated value of properties is useful, it does not relate directly to the values stated in the SMP.

It is, however, recognised that the economic assessment in the SMP is undertaken at a high level, and this is acknowledged in the SMP. The values do, however, provide a realistic estimate of the scale of damages that might occur as a result of flooding.

For clarity:

- *Taking, first, the £25M quoted in the question derived presumably by the summation of the annual average damages over the three epochs. The annual average damage is the damage that might, on average, be expected to occur (summed for all properties affected) in any one year, in any epoch.*

This is discounted over each year of epoch 1 (a period of 20 years) to give a present value damage of £2.8M. This compares to the present value damages that would occur if all defences were allowed to fail during epoch 1 of £28.7M.

This highlights two important points that have been considered in the SMP:

- *That at present the defences play an important role in defending the village (economically equivalent to some £25M over the next 20 years).*
- *That even with defences in place, providing a high standard of defence, The area remains at risk under a very significant storm event.*

Overtime the annual average damage increases. Even maintaining the existing standard of defences would result in a present day value of residual damage of some £4M during epoch 2, rising to £10M in epoch 3. This reflects the increased level of flooding that would occur due to sea level rise. It should also be noted that these figures do not include the residual damages that might occur due to ground water, surface water flooding and flooding due to overspill of the water courses.

- *Second, the £90.7M. This is the summed damages that might be anticipated, on average over the next 100 years, due to flooding from the sea. In fact, the question correctly identifies that this is a simplification of a full economic appraisal but not in the way suggested by the question. Under normal economic rules in assessing the benefits of a scheme (as opposed to the high level assessment provided by the SMP), this value would be capped at the value of the property. It would be assumed that at some point in time, rather than properties being flooded on a regular basis they would be abandoned. (E.g. it is assumed from an economic perspective that if a property were flooded to the extent that the damage to the property exceeded the value of the property then the owner of the property would not consider it sensible to continue to live in that property.)*

Taking for example the total value of properties quoted in the question as being £60M, then if, overall, damages exceeded that value then property values would be written off. Again strictly speaking, if the properties were abandoned, rather than having continuing risk of flooding in year 40, then the present day (discounted) value of that £60M would be around £16M.

The SMP considered the broad economic situation so as to examine the change in flood impacts over time in a consistent manner. As discussed in answer to question 55 above, the Defra Guidance highlights the need to examine the economic feasibility of the management plan, taking account of other factors, such as the longer term sustainability issues.

57. SMP2 states the following:

"4.5.12 Throughout the SMP area properties and local access is protected through HTL and MR policies. In some locations such as at Clarach Bay, Borth, Fairbourne, and Llanfairfechan the policy of MR is anticipated to impact on properties through loss due to erosion or flooding in the long-term. In certain cases these impacts can to some degree be mitigated through the provision of early warning systems for flooding and the relocation of properties. Where it is not sustainable to maintain properties the intent of the SMP policy is to allow time for frontages to be adapted and properties relocated if required."

Can you explain where the circa 400 properties in Fairbourne will be relocated to, how this will happen, what the estimated cost of this relocation will be, and is any of this cost expected to be born directly by the Fairbourne property owners?

These are questions which we do not yet have the answers to. We are in the process of undertaking a Project Appraisal Report which will explore more fully the options available to us over time, in order that we can make more informed decisions about the future of Fairbourne.

58. SMP2 provides the following definition:

"Sustainability

is a concept, which deals with mankind's impact, through development, on the environment. Sustainable development is 'development which meets the needs of the present without compromising the ability of future generations to meet their own needs' (Brundtland, 1987). It should also take account, for example, of the long-term demands for non-renewable materials."

Can you explain how preserving Fairbourne for the next 100 years will compromise the ability of future generations to meet their own needs?

In answer to question 55 we have hopefully addressed the issue raised by this question in setting out the thinking behind the conclusions of the SMP in relation to sustainability.

It is acknowledged that, as stated in the Defra Guidance that "sustainability' can mean different things depending upon the individual viewpoint; it is not necessarily the same for conservation bodies, the national treasury, or local residents within a coastal settlement. What is required is consideration of the conflicting pressures on the coast and constraints upon its management, to seek to provide an optimised plan, one which provides 'balanced sustainability' i.e. it needs to consider people, nature, historic and socio-economic realities."

If, however, we do not address the issue raised by the SMP now and understand and examine how we address the issues, then we consider that we are merely handing on the problem to future generations, with far less time and opportunity to deal with the important issues that have been raised.

59. It is understood that a 'Buy and Lease Back' option is being investigated. Considering that the environment could change significantly over the next 40 to 50 years (for example oil is expected to run out), the only sensible option to be pursued is where home owners of Fairbourne are guaranteed the market value (as if Fairbourne was not at risk of flooding) at the point at which their homes need to be abandoned, which may well be in 50 to 100 years time or, indeed, never.

The 'Buy and Lease Back' option will result in a premature degradation of the Fairbourne community as many will feel they have no alternative but to take the option and leave Fairbourne as soon as the government has purchased their property.

Considering the above, why don't you adopt a policy which encourages Fairbourne to survive as long as possible?

Buy and Lease Back is one option that has been considered elsewhere and the project is investigating this alongside other approaches being considered in other parts of the UK. As discussed in the answer to question 55, earlier, under current policy "Operating authorities, local government and national government do not have a duty to provide protection against flooding or erosion. Nor is there any reason to assume that this will change in the future or that individual losses would be compensated for from public funds."

The project has engaged with Welsh Government in examining these important issues. It is only through identifying the problem through the SMP that this has been possible, dealing with the difficult but very real issues that are presented by climate change and sea level rise.

In terms of "keeping Fairbourne going as long as possible", this is the challenge that is being taken up by the project. However, it is necessary to plan for the eventuality of abandoning defences and the need for relocation. At present the project has set in place actions that aim to clarify the trigger point or threshold at which such action would be necessary and to identify possible actions that need to be taken now and over the intervening years to mitigate the problems being faced.

60. It is clear that SMP2 has not considered accurately the economics of sustaining Fairbourne over the next 100 years. It is also, without doubt, the case that the Fairbourne area can be sustained beyond 40 to 50 years if the correct level of funding is available, i.e. the sustainability of Fairbourne is an economic issue over and above an environmental issue. With this in mind, please can you communicate publicly and, especially, to estate agents that there is currently no

accurate evidence to suggest that the future sustainability of Fairbourne is under threat? If you do not want to do this then please explain why?

As outlined in the response to question 56, only a high level assessment of economics have been undertaken in the SMP. This has been undertaken accurately in line with standard procedure for appraisal at this level of investigation. However, despite the high level approach that has been undertaken, this still clearly demonstrates that with sea level rise the residual damages (those that would occur in the event of failure of the defence system or would occur should the defences be overtopped by an event of a severity tht exceeds the standard of defence) increases sharply with sea level rise. Even in maintaining defences at their current standard in the future the investment required will also increase.

In effect, in the future there would need to be increased investment with a reducing benefit and increasing fragility or vulnerability over time, imposing an unacceptable reliance on defence and a significant burden on future generations. Taking the long term perspective (in line with the principles of sustainable development as discussed in answer to question 55) a balance has to be struck between the aim to sustain the community and the ever increasing reliance this places on maintaining defences.

While the position put forward by the SMP is not one based on environmental considerations, over and above those of sustainability and economics, the project will consider environmental gains that can be achieved through change and, where possible, this will be taken into account in supporting the process of change.

Action has been taken through the present project to address the issue, in the short term, of property valuation. In developing the project further this will be reviewed and further information provided as required to support the community.