

Surveying for Flood Resilience in Individual Properties

Inception Report - July 2014

1. Project context

1.1 Project background

Property-level protection (PLP) schemes enable and equip property-owners with cost-effective and easy-to-implement tools to help take effective action themselves, bringing local communities together to limit the damage and stress that flooding causes. Property level protection technologies, products and practices can make a significant contribution to broader flood resistance and resilience strategies. PLP surveyors have a vital role in designing and approving completed schemes. However, a lack of independent and competent PLP surveyors to support communities and scheme designers and the lack of a coherent framework for assessment and associated protocols undermines the confidence of homeowners and insurers alike. There is, for instance, currently no formally recognised qualification, national training, or approved standards against which surveyors can be benchmarked or assessed.

This project evaluates current practice in PLP surveying, firstly to isolate best practice and secondly to identify opportunities for catalysing high quality PLP surveying. Information collected through workshops, cases studies and sector-wide engagement with stakeholders and practitioners will establish the competencies required for this important role. Defining these competencies (knowledge, skills, behaviours and experience) and associated training and accreditation will help gain the trust and confidence of householders, scheme promoters and insurers and ultimately support the policy objective of encouraging wider PLP take-up.

This project 'Inception' document provides a prospective schedule of the research. It also provides a draft framework for the final project report and the project workshops. It should be considered a 'living document': details will be developed in consultation with the clients and stakeholders over the course of the research. The document also includes a draft of the Role Profile for comment.

1.2 Project aim

The overall project aim is to **define the extent and nature of a surveyor's role to establish the knowledge, skills, behaviours and experience (or competencies) that PLP surveyors require.**

Specifically, the project objectives are as follows:

1. To support growth objectives by providing support for uptake of new technologies (PLP) by the public and creating business development opportunities for small surveying businesses and sole-traders to provide this service, including in the context of the home-buying and selling process.
2. To develop competency specifications for professionals wishing to carry out this role: identify and map the knowledge and skills surveyors need to develop in a range of domains (including structural surveying, engineering, Building Regulations, hydrology and communication with householders).

3. To identify the opportunities for delivering the necessary training in the context of the current professional development landscape and map out a development pathway for those wishing to develop these skills.

4. To identify any additional barriers to the development of a corpus of competent professionals able to survey, project-manage and sign off schemes to the satisfaction of the insurance industry and others.

The **project deliverables** include:

1. **Inception Report.**

2. Provide at least 5 **Case studies**/lessons covering the important technical issues highlighted by the scoping workshop held by Defra and RICS in February 2014 (we suggest these could be based around the main themes).

3. **Competency framework for the role** of property level flood risk surveyor.

4. **Guide for householders** – jointly with Royal Institution of Chartered Surveyors (RICS) – setting out how to choose and work with a flood risk surveyor.

5. **Competency / training route map.** This would be a guide to help specialists (RICS surveyors, construction professionals, Hydrologists or Engineers for example) understand the further training and new knowledge they would require to provide property level flood risk management advice and where this might be sourced.

6. **Technical Guidance for local authorities and others** who may need guidance to help understand the competencies of the role and to procure these types of services from suppliers

7. **Final report** – including best practice recommendations for up-skilling the sector and proposals to address any gaps or new needs identified through the project.

The research contract commenced on 18th July 2014 and will complete on 31st March 2015. The project start-up meeting with the Defra Steering Group took place on 30th June 2014. Routine Steering Group and project consortium team meetings will take place on approximately monthly intervals, either face-to-face or via teleconference calls. In addition, Defra is in the process of establishing a Project Board with wider stakeholder representation. The consortium team propose two Project Board meetings are held (one in September 2014, the second in January 2015) in order to report on progress and to seek views and feedback. Additional contact will occur via phone conference calls and email as necessary.

2 Putting PLP in context

2.1 Property level protection – background & drivers

There is limited academic literature that specifically examines *surveying for property level protection*. However, there is a small and growing body of literature that studies property level protection more generally. It is also acknowledged that PLP has been the subject of significant interest in recent policy related research, both across the UK and further afield. This section establishes the context of PLP, with particular attention paid to surveying in the following section.

Recent flood events in the UK have been complex. They are localised and dynamic, meaning it is neither cost-effective, nor feasible, to rely solely on large-scale flood defences. Flood resilient (FRe) technologies and systems can offer a solution where large-scale flood defences are inappropriate, challenging to implement, or where there is insufficient funding for major engineering works. For example, cost-benefit or cost-effectiveness analyses can show that small communities, where relatively few properties require protection, may be more suited to small-scale FRe technologies. Evidence from pilot scheme reviews shows how property owners and communities have welcomed having more effective options to tackle flood risk, especially noting the peace-of-mind these options provide. It is important to note that while such technologies only afford some level of protection (and hence expectation management is crucial) and can be costly in the short-term, they often reduce the costs of replacement and/or reinstatement in the long-term (Kazmierczak and Connelly 2011). PLP technologies may also provide ‘defences behind the defences’ or a further layer of resilience, reducing the vulnerabilities flood defence systems in the whole. They can also provide a more effective option than significant sandbagging efforts by local authorities: measures that can afford actual flood mitigation whilst realising cost savings for the local authority, including reducing the need for costly sandbag waste disposal as part of the clean-up recovery process.

2.2 PLP resistance and resilience

FRe technologies and systems deal with flood risk at the receptor. In this context, FRe technologies and systems aim to limit or prevent flood water from entering a property (resistance or dry proofing) or, through adaptive measures in the property (such as tiling and raised electrics) allow water entry - or in the case of deeper and prolonged floods, slow down the rate of water entry – to limit the damage and allow properties to be inhabited quicker than they otherwise would had there been no protection (resilience or wet proofing).

Further themes to be explored through the project: the contribution that PLP and adaptive technologies can make to FRM

2.3 PLP – systems and scales

PLP technologies and systems should not be considered in isolation. They do nothing to reduce the drivers of flood risk, and they arguably do little to manage flood risk at source or pathway. Rather, property level protection should be seen as forming part of a wider and sustainable flood resilience strategy that addresses both the social and technological aspects of flood management; from warning systems such as telemetry, to planning, emergency response and recovery. Understanding how the technologies, systems and person will behave when in use, particularly the mechanisms and conditions under which they may fail, also becomes important. These and similar lessons from policy,

practice and academic research will be considered in the examination of PLP survey competency and flood risk assessments.

Further themes to be explored through the project: systems, scales, limits and pitfalls (including looking at the property life cycle).

2.4 PLP vulnerabilities

Property level protection technologies and practices are not without their own vulnerabilities and limitations. There are instances where PLP systems – or the homeowner’s practices - have “failed”; that is, where water inundation has occurred beyond the accepted thresholds of the product. These vulnerabilities can be not only technological, but may also be due to human and social factors. Often, it is hard to accurately identify how and where such issues may arise. Across the sector, there is a tendency for third-party installation so the problem could originate with the manufacturer or through poor communication with the installer. There could be faults with the original survey, perhaps the installer missed a stage in the installation process, or perhaps the user failed to correctly deploy or maintain the product or technology.

There is a clear need to focus specifically on surveying as a means of remedying some of these failures and vulnerabilities. Accreditation at this point in the ‘PLP journey’ is one method of providing property owners and insurers with the confidence that the PLP system works as intended. During the SMARTeST project, one respondent indicated that “... *the surveyor carried out their surveys first and the contractor tendered on the basis of the surveys. This was disruptive for the resident and overly time consuming. Also the surveyor would miss details which the contractor would later identify resulting in a longer programme and increased costs.*” Ultimately however the critical requirement is for the PLP surveyor to be completely impartial and independent from any vested interest in product manufacturer and installation.

2.5 Social and human dimensions of property level protection

Research has been undertaken into the complex social and psychological barriers that prevent property owners from taking up the measures, or how willing property owners are to pay for them. Psychological vulnerabilities, such as fatalism, amongst flood victims may inhibit uptake; those more likely to take up mitigation measures have a high perception and acceptance of risk (through frequent flood events) combined with trust in experts and government (Lin, Shaw & Ho 2008).

Public consultation has been shown to privilege the voices of flood victims who often demand “protection” (Harries and Penning-Rowsell 2011). Property owners can be willing to protect their homes from flooding and to contribute financially to flood defences but this is predicated on a responsibility to protect their homes generally (Soane et al 2010). Deprivation is a key variable to which better risk communication and the articulation of responsibilities for flood risk management need to be combined with incentive schemes and support for the poorest (who will frequently have no insurance) in order to increase the uptake of domestic flood protection (Birchard and Kazmierczak 2012). Others argue for attention to be paid to the emotional feelings of individual householders to technology; a relationship that is complicated and can veer between restoring ontological security to perpetual anxiety (Harries 2008).

Further themes to be explored:

- community and scalar dimensions.
- Note standards that do exist
- Draw upon participants previous work: SMARTeST/ academic research; JBA work on Best Practice Guide and Pilot Review; National Flood Forum work on the Blue Pages and 'Property Protection Advisor'; Annex 2 of the tender document; Defra 'grey literature'
- Suggested references: IPCC Pathways; BRE guidance; Insurance and construction sector guides; EA Framework for installation; CCC report on growth in PLP; Repair and Renew assessment

2.6 PLP surveying – drivers and limitations

Establishing the skills, knowledge and experience required to deliver PLP and FRe solutions will help in the understanding and definition of the role as well as the drafting of technical guidance for homeowners and for local authorities and others (Environment Agency, Water Companies etc). The consortium team will draw upon their wide range of experience and evidence to develop models and drafts that will be shared with and feedback and views sought from the Project Board and the wider stakeholder engagement planned throughout the project. Initial factors and areas to be considered further include:

- Drivers for *surveying* PLP (i.e. why is it needed) – that they can be effective, standards, competence, trust, insurers, 'intangibles'. Discussion of how limits to PLP and instances of failure help build case for surveying.
- Will reference increased take-up of PLP. Concern regarding **trust** and **standardisation**.
- Accreditation and trust. Standardisation – from good to common practice.
- Insurance and how this frames PLP/ establishes a context for PLP surveying.
- Practicalities of assessments and surveying including cost effectiveness, affordability to all sections of society and accessibility/ risk literacy.
- 'Performance review' and feedback from the Scottish Government research and practices.
- Literature search on value of independent assessment for building trust and confidence.
- Literature on how to balance 'technical' and 'soft' skills – any evidence that supports this.
- Should also look at training (or lack thereof) - how do we know if a surveyor is quality assured or if a product is good? Public liability insurance for flood assessors. Lack of training and information.
- Publication of '6 steps' guidance and Defra Best Practice Guidance for local authorities

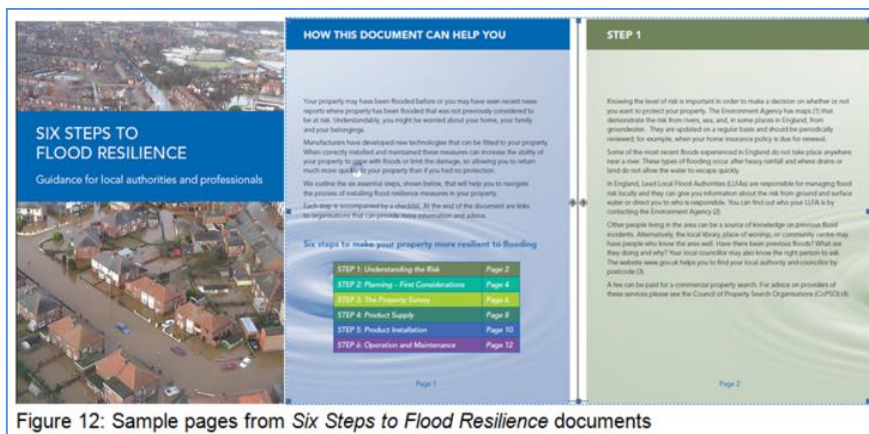


Figure 12: Sample pages from *Six Steps to Flood Resilience* documents

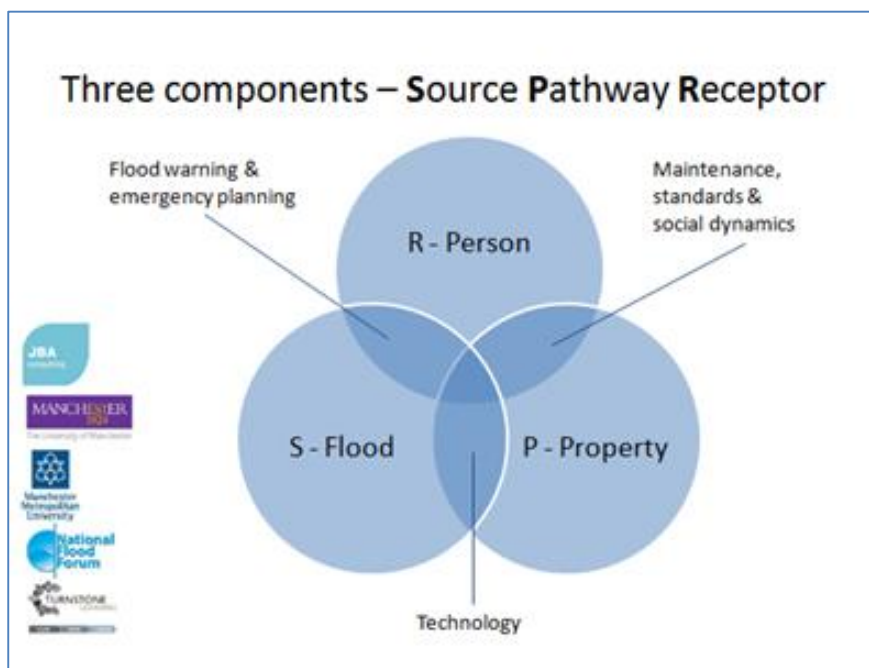
2.7 Independent Flood Risk Assessors and Assessments

This section will end with a series of questions that will be traced through the interviews, case studies and workshops. Case studies will look for good practice and pitfalls and will highlight lessons from these.

Early discussions have already identified the critical requirement for a PLP surveyor to be independent and to have a thorough knowledge and understanding of flood risk assessment. A further PLP survey will normally be undertaken by the installer – the installation survey – but this relates to the specifics of the chosen product and its installation. The wider flood risk assessment of the catchment, local environs and property survey requires a more holistic and comprehensive understanding of how such a flood risk intervention can and will fit into the flood risk management hierarchy (see appendix 3). This wider appreciation and scope has resulted in adopting a working title for the PLP surveyor as an Independent Flood Risk Advisor (iFRA) as a means of capturing the greater extent and breadth of subject than is implied by ‘property surveyor’. We will explore, develop and consult on this along with proposals on the principles of surveying, including justification for ‘iFRA’:

- Property level protection survey/ surveyor: ‘Survey’ may not be an appropriate word...;and a ‘surveyor’ may be too narrow; Reference to property may negate social and human dimensions; Must be autonomous
- Initial assessment distinguished from installation survey – vested interests even within one organisation

A framework in which the iFRA operates has been developed that reflects how a PLP system or other FRe measures need to account for interactions between the **flood (source), property (pathway) and person (receptor)**. Such a framework will help in the definition of the role and in the development of homeowner guides and the technical guidance for local authorities and other operating authorities.



3 Identifying best practice (Case studies and interviews)

The research will identify and highlight best practice through case studies and interviews. The team will identify ‘lessons’ from this practice, providing practical approaches and examples that can be further developed. As part of this, we will also draw on scoping workshop held by Defra and RICS in February 2014.

3.1 Case studies

Initial research and investigation has shown that it is unlikely that we will find directly commensurate international assessor/ assessment regimes. Given that, the case studies have been designed to identify isolated instances of best practice. Although the bid document highlights the need to learn from international practice, we will ensure that good practice from the UK will also be examined, including surveying schemes undertaken by PLP installers and manufacturers. The team propose that we will identify, firstly, cases where surveying has been used internationally, even on an *ad hoc* basis (four case studies); and secondly current good practice in PLP surveying across the UK (one case study). Beyond isolating best practice, the case studies will also identify limits to surveying and potential pitfalls that will provide lessons for the development of assessors and assessments in England and Wales. It is important we capture experiences where problems have been seen and to learn from these as much as to simply identify best practice examples.

Case study selection

Criteria	Analysis
<p>1. International schemes for PLP assessments and assessors</p> <p><i>Suggested cases: Queensland, Australia; Sweden; USA; France; Germany; Netherlands</i> <i>Alternatively, a case study could be composed from several European countries</i></p>	<p>Assessment of how international best practice may/ may not be transferrable to the England/ Wales/ Scotland context</p>
<p>2. UK practice in PLP surveying and surveyors (to include all regions)</p>	<p>Identification of how best practice may become common practice, and the barriers to this</p>

We propose that the case studies will be succinct (a few pages) and will make use of graphics, charts and illustrations. In the first instance, research undertaken on the user needs of case studies for the new Climate Ready Support Service will be followed (Environment Agency 2013). They will be driven by a focus on the methods and techniques used in surveying as well as drivers and motivations. Users will be directed to websites for further information. Where the gathered data is sufficiently rich, a technical appendix may be included with a direction in the case study for those “who wish to know more”.

A PLP scheme has two components that have to function together: the measures and the householder. Case studies will be identified that highlight how the surveyor has to factor both into scheme design: examples of where this has and has not been achieved will be used to highlight the consequences and implications for future training. The success of any PLP scheme comes through effective and on-going engagement with communities. The input from a number of key community flood groups will harness

the localism and partnership spirit of PLP and we will identify a list of five or six community flood groups which would provide valuable input. Drawing on the themes identified in the RICS/Defra workshop, it is possible to identify criteria through which to select five case studies where PLP surveys have been undertaken and lessons learned. These include:

- Case studies that cover urban and rural locations to compare densely populated areas with more sparsely populated communities
- Insurance company response
- Residential property type (based on 34 MCM types and Defra Cost Effectiveness research)
- Locations that highlight a range of flooding mechanisms and sources
- Scale i.e. schemes provided to a single home owner or a whole community through a local authority (thereby using one consultancy company).

Criteria for case study selection will be established that will examine:

- The consequences of failure and the benefits of taking the right approach to PLP
- The level of skills required for different surveys currently offered include:
 - a. A desktop survey – say an initial survey when buying or selling a house
 - b. A field level survey – what are the elements that this would include
 - c. An installers survey – as above
 - d. A post inspection survey – as above
- Case studies involving different types of flood risk
- Case studies involving different types of houses
- Case studies involving different procurement routes

To organise the case study research, presentation and analysis, we propose the use of a data collection and presentation template (below). This has been designed to reflect both the research questions outlined in the tender document and recent discussion amongst the research team and with the clients regarding the parameters of the research. Several themes have been identified. Beyond examining the context and drivers of the use of PLP, the template focuses attention on how:

- the *practice of surveying* was framed (both in terms of detail and principle);
- identifying the *professional* required;
- and then recognising the most *appropriate profession* to provide the requisite skills, knowledge and experience.

The template may not be directly applicable for all cases – but we suggest it forms the *basis* for the case study drafting. The precise format and scope of the case studies will be agreed in accordance with the Steering Group. There is a balance to be struck with any such template to ensure the cases can be contrasted and compared (i.e. for the analysis), but also to ensure the nuances and innovations within the particular cases are captured. In addition, we will forward drafts of the case studies to colleagues for verification and refinement.

Case study – proposed format

Context

- Drivers and constraints for PLP surveying
- Statutory and legislative context
- PLP in a wider context – policy and practice

Scheme(s) background

- Brief description of the PLP scheme
- What was the nature and extent of surveying?
- How accessible *and* affordable are the schemes? (costs, were certain sectors of society excluded)
- Were (independent) flood risk surveyors appointed? Why, why not?
- Identification and selection of surveyor - how were they found, selected and was there procurement/ due diligence process?

The Practice (flood risk and PLP assessment)

Description of the appraisal of flood risk and contribution of PLP (n.b. where possible, to look at survey and assessments):

- a) Sources, extent and severity of flood risk
- b) Flood history of locality and property (use of local knowledge)
- c) Property ingress routes and building fabric
- d) Flood warning arrangements
- e) Social considerations (including, but not limited to, ability to use manual PLP measures)
- f) Community and scale considerations (rows of houses or community PLP scheme), including flood watch schemes, and community flood plans
- g) Understanding various PLP technologies
- h) How were PLP options presented to the client? How were PLP limits and vulnerabilities presented?
- i) How were standards of recommendations appraised?
- j) What was the PLP procurement process?
- k) Is the risk assessment 'dynamic' – does it take account of changing drivers of risk (climate change, urbanisation) or vulnerability
- l) Responsibilities of the client
- m) Maintenance considerations, follow-up & review schedule?
- n) Has there been a recent flood and of so what went wrong?
- o) Relationship with insurance – before and after the surveys/ works

Best practice and 'gaps' assessment – what is done well and what could be done better?

The 'Profession' (Accreditation and registration):

- Is there a register or list of surveyors?
- Is there a professional body that represents 'approved' assessors?
- Training and CPD offered through professional bodies
- Relationship between the assessor and the installer/ supplier? Extent and surety of independence and concerns regarding poor practice/ lack of independence

The 'Professional' (Knowledge, training and standards):

This could replicate what's in 'the practice'? Or it could look more broadly at the modules outlined in the Defra presentation?

Needs to take account of social and technical factors:

- How is training offered
- What is the accreditation hierarchy?
- The importance of independence
- Importance of communication
- Is the professional answerable to the profession?
- Other general issues regarding 'enforcement' (what happens when things go wrong)

3.2 Interviews with international practitioners

As detailed in the project bid, the team will conduct semi-structured interviews with PLP experts (academics and practitioners) both in the UK and globally. The interview schedule will broadly map on to the themes and questions outlined in the case study template.

- How PLP surveying takes place, who does it, and what are the points at which they take place?
- Training and core competence (to feed in to the competency and role profile work that we are already undertaking).
- Signposting to practice documents, regulations, frameworks and any associated literature.
- Highlight best practice - both in terms of the contest for surveying and the details of both the training and the survey itself.
- Highlight where it doesn't work so well, pitfalls, barriers and limitations.
- Drivers and standards.

We have identified a series of potential interviewees/ consultees (see table below). In line with the 'snow balling' method, we will ask these initial contacts to identify further potential interviewees.

Prospective interviewee	Area of expertise
Dr. Bingunath Ingirige (Salford University)	Surveyor with interest in flood adaptation and community resilience against flooding and other weather extremes
Prof Iain White (University of Waikato, New Zealand)	Planner with expertise in PLP (SMARTeST Project). May also be able to advise on Australian case study
Dr Stephen Garvin	UK based Building Research Establishment (BRE). Also have European expertise.
Prof Chris Zevenbergen	Water Engineering Department of UNESCO-IHE and at TuDelft
Stewart Cooper/ colleagues	RICS
F. Ogonoye	Royal Haskoning
Dr Katherine Welsh	University of Chester (CPD)
Joachim Tourbier	USA
Association of British Insurers	
National Federation of Property Professionals	
Representatives from UK manufacturers	Some UK manufacturers conduct surveys. Some also will have international experience. Although this needs to be handled sensitively, we will approach the sector and ask for further information on their 'in house' schemes.

The indicative interview schedule that has been developed is shown below:

Theme	Question/prompt
The Practice	<ol style="list-style-type: none"> 1. What were the drivers for initiating a PLP scheme? 2. What is the statutory or regulatory framework surrounding community and homeowner level flood protection (and, if appropriate, PLP)? 3. How does PLP fit against the wider context of FRM? Was an appraisal undertaken of whether the relevant risk management authority planned to undertake a wider community flood alleviation scheme, rather than implementing PLP? 4. What was the relationship between the assessor and the installer/supplier?
The Profession	<ol style="list-style-type: none"> 1. Is there a register or list of surveyors? Is there a professional body or form of accreditation? 2. Is there a need for questions on training accreditation? 3. Have there been any noticeable or reported impacts of PLP on insurance? 4. How was the use of appropriate terminology (e.g. understanding and communicating the difference between prevention, reduction, mitigation etc.) monitored? 5. Are you aware of anyone else conducting research into PLP surveying, skills and competency? 6. Was there any best practice or lessons emerging?
The Professional	<ol style="list-style-type: none"> 1. Were flood risk surveyors appointed? Why, why not? 2. Was independence of surveyors from product suppliers important? 3. Identification and selection of surveyor - how were they found, selected and was there procurement/ due diligence process? 4. Describe how the appraisal of property-level flood risk undertaken? <ol style="list-style-type: none"> a. All sources of flood risk (including climate change) b. Flood history c. Flood warning arrangements d. Ingress routes at each property e. Ability of residents to deploy any manual measures f. Community cohesion (e.g. existing Neighbour Watch schemes etc.) 5. Did independent flood risk surveyors engage with residents prior to surveys; if so, how? 6. How were standards of recommendations appraised? 7. How was the suitability of the recommended product for the homeowner appraised, and reviewed? 8. Did the surveyors / assessor understand the limitations of PLP, and how did they communicate this to the homeowners? Technical and social dimensions? 9. What steps did the surveyor take to manage expectations of the homeowner? 10. Did the surveyor understand and explain what was expected from the homeowner (storage, maintenance, deployment, individual flood plans etc)? 11. Rate in order of importance, which skill you thought was most important in the independent flood risk surveyors you appointed: <ol style="list-style-type: none"> a. Engagement and communication b. Understanding of building types, fabric, construction and styles c. Flood risk management d. PLP technology

3.3 Synergies with other programmes

In response to requests made at the Steering Group meeting, the team will identify analogous schemes, programmes and professionals in England and Wales that advise on products or technologies. This will identify: i) good practice that can be *adopted* for flood risk assessing; and ii) opportunities or initiatives that may be *adapted* to encompass PLP surveying. These will be finalised in discussion with consultees. We propose that potential cases may include those outlined in the table below.

Current practice – adoption	Current practice – adaptation
The Green Deal	Insurance
Lessons from Home Information Packs	Council tax/ local authority funding
Fire & Rescue Service – fire prevention schemes	Conveyancing
Corgi registration and Code of Practice	Building surveying processes
Crime Prevention Through Environmental Design (CPTED)/ ACPO’s Secured by Design scheme	Water companies
RICS training schemes and protocols	Water Bill
Other insurance schemes (car, fire etc)	Fire & Rescue Service work on flood awareness/ prevention
PAS or BSI	Humber Rainbow scheme
Climate Ready (Mott Macdonald)	The planning process and building regulations
	Local authorities work with vulnerable communities

3.4 Role profile

The team will map the training and development landscape for surveyors. We will also identify how gaps might be filled. This aspect of the work is based on the assumption that different kinds of people or professions might be involved in surveying. There is need to understand their current capacities and where the gaps might be.

The team have started to identify these core competencies, and their training and continuing professional development needs. A separate **Role Profile** has been drafted and submitted in conjunction with this Inception Report.

3.5 The ‘skills’ workshops and webinars

A series of workshops and webinars will ask for comments on the detailed role profile. It will also provide an opportunity to examine issues regarding the implementation of the emergent proposals. The workshop approach aims to build consensus and will aim to include a representative from all groups identified in the stakeholder mapping. Face-to-face workshops will be held in Manchester and London. These will be iterative in nature. The first half of the workshop will seek to understand existing knowledge and identify where the major gaps lie in relation to the outlined competency framework. This will enable a mapping of the current landscape (to complement those identified by RICS). Scenario visioning will be used to map out a range of future practices in terms of up-skilling the sector and the barriers to doing so. By the end of the workshop a menu of competencies and skills,

and how best to deliver them, will be achieved. The project team will undertake a content analysis in order to identify and group the key issues and suggested approaches that may be taken.

3.6 Lessons for the UK – ways forward

In light of the aforementioned work encompassing the case studies, the interviews, the identification of schemes for adoption and adaptation, and the emergent role profiles, the team will identify ‘lessons for the UK’. This will include practical approaches and examples that demonstrate best practice within the industry.

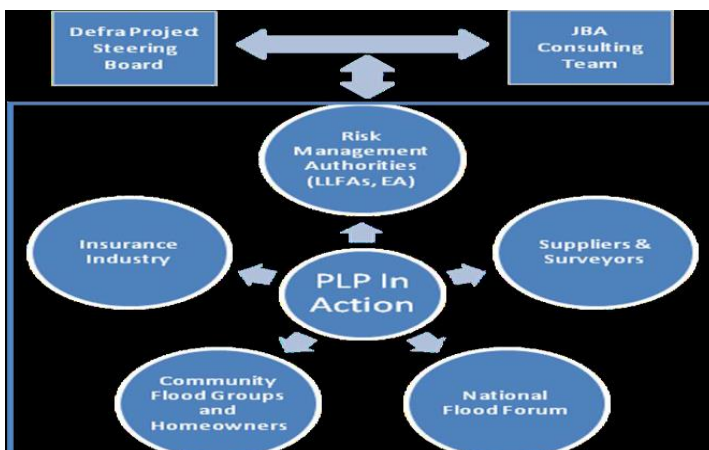
We anticipate the development of an idealised vision of the assessor and assessments for comment in the workshops. In addition, we will investigate other concerns for instance, the need to ensure the schemes are affordable and accessible yet still are of a high quality.

4. Engagement and dissemination

4.1 Stakeholder mapping

By ensuring wide engagement and inclusion of stakeholders and practitioners we will help provide recommendations that are based on the input and support of the wider PLP community. This requires the involvement of a wide and diverse audience to capture these different interests and drivers to ensure our recommendations are practical and achievable with the widest possible support. Stakeholders will be recruited using the combined contact list of the project team which covers academia, professional bodies, communities, scheme promoters, businesses, insurers, the flood protection industry and those of the proposed Defra Steering Group and Project Board. We suggest adopting a typology along the lines of: Professionals (who’ll do it); Accreditors and Trainers; Users; and Policy and Practice stakeholders (RICS/ Insurers/ PLP sector etc). A wider grouping would include end-users/ communities/ training providers & accreditation bodies/ government/ local authorities/ insurance industry/ flood protection industry/ Estate Agents and/or mortgage lenders. We will be particularly focussed on obtaining the input and views from communities and householders who have received PLP and are in effect the end user; they will also be important to gather views and experiences on the social, behavioural and other skills needed by the surveyor.

Diagram 1 below illustrates the broad arrangement of parties and stakeholders involved in a typical PLP scheme:





These stakeholder groupings are summarised below:

Stakeholders		Surveying and Training	End Users of PLP
ABI/BIBA	Defra	CIWEM	Water companies
CII	Environment Agency	Universities	Flood risk communities and NFF
Estate Agent Surveying	Flood product manufacturers (incl FPA)	RICS	Local Authorities
Local Government Association	National Flood School	House Building Federation	Housing Associations
Landlord Associations	Mortgage Lenders CML	Chartered Institution of Engineering Surveyors	Environment Agency

4.2 Survey the current landscape of training provision for surveyors

The initial Defra and RICS workshop has provided useful insight and views on the current landscape and levels of competency amongst PLP surveyors. Using the main themes of this workshop the team will gather further evidence and views via interviews and on-line questionnaires. We also anticipate gathering views and evidence on current provisions through discussion and consultation at the initial Project Board meeting. The views of RICS will be particularly important and will probably be best placed to share views and to also identify best practice.

4.3 Identifying the route to up-skilling the sector

This Work Package will provide the competency framework and training route map. We propose an approach that aims at building consensus and as mentioned will hold a series of face-to-face workshops and webinars with an invited group of participants. This will be iterative in nature. The first half of the workshop will seek to understand existing knowledge and identify where the major gaps lie. This will enable a mapping of the current landscape (to complement those identified by RICS). Scenario visioning will be used to map out a range of *future* practices in terms of up-skilling the sector and the barriers to doing so, with particular emphasis placed on how business development and growth of small businesses can be supported. Particular attention will be paid to assessing how surveying initiatives will be delivered and how small businesses and enterprises will be supported in engaging with these opportunities. By the end of the workshop a menu of competencies and skills will be presented, along with an identification of their adoption and how we can enable other people and organisations to promote PLP.

The project team will undertake a content analysis in order to identify and group the key issues and suggested approaches that may be taken. Following this workshop, we propose hosting a webinar in which the list of competencies, skills and barriers are presented to the wider contact list who will be asked to rank the menu of options and to arrive at consensus regarding the potential route map. Participants will be directed to a website through which they can register to take part. After the scoping workshop, a series of statements on the required knowledge and skills of surveyors will be developed and participants asked to comment upon them. This means that a diverse set of practitioners can validate and prioritise a larger list. The webinar will also aim to gather evidence on the barriers to training and practical solutions.

4.4 Post-workshop engagement

After the ‘skills’ workshops and webinars, a series of statements on the required knowledge and skills of surveyors will be developed. Following the outcomes of the workshop and webinar, a follow-up targeted workshop for specialists will be undertaken (to be held at a neutral venue and perhaps in conjunction with RICS) in which they will identify how the skills and competencies, identified through the scoping workshop and through the webinar, can be realised in practice and further supported. Workshop attendees will be divided into groups to identify specific themes stemming from earlier research. The focus will be on collective feedback and review in order to identify a range of different pathways to training and accreditation that takes account of the multiple competencies involved. The workshop will also consider how best to package the message of surveying in a way that emphasises how surveying can stimulate both small businesses and the flood resilience and training sector. This will also feed into the final report that will identify best practice recommendations.

The team propose that a webinar can be used to disseminate findings and to request further feedback and comment from appropriate stakeholders. Participants will be asked to rank the menu of options and to flag up any particular issues from their sector. This means that a diverse set of practitioners from across England can validate and prioritise a short list from a longer menu of items.

We need to make sure that we get representation from all on the stakeholder mapping. Proposed themes for further investigation include:

- Engagement activities with the surveying/insurance sectors to determine what level of engagement is necessary to build capacity in these sectors to support flood resilience.
- Presentation of policy questions
- Approaches to increase knowledge and best practice within the surveying sector – RICS
- Approaches to increase consumer confidence and insurance industry
- Identification of knowledge gaps and scope for accredited training (Defra – and potential delivery channels for training)

4.5 The ‘Targeted workshop’

Following the outcomes of the skills workshops and webinars, a follow-up targeted ‘roundtable’ workshop for specialists will be undertaken. The main participants are likely to be training providers with the aim being to understand requirements for a specification to inform the development of training modules.

Participants will identify how the skills and competencies, identified through the scoping workshop and through the webinar, can be realised in practice and further supported. Workshop attendees will be divided into groups to discuss specific themes developing from the earlier research, and in particular the scoping workshop. The focus will be on collective feedback and review in order to identify a range of different pathways to training and accreditation that takes account of the multiple competencies involved. The workshop will also be used to consider how best to package the principle of surveying in a way that emphasises how it can stimulate both small businesses and the flood resilience and training sector. This will also feed into the final report that will identify best practice recommendations.

5 Co-creation of Best Practice Guidance

In order to support the development of best practice guidance, we will collaboratively draft **best practice guidance for householders** and further **technical guidance for local authority** scheme promoters and professionals. This will be based on the range of data gathered in the exercises outlined above and will distil good practice in surveying in a way that fits with current guidance, including the SMARTeST 'Six Step' process (White et al 2013), the recently published Defra Best Practice guide for local authorities and other outputs on the NFF's Property Protection Advisor. This will cover the various dimensions involved in surveying as well as the different forms: from the flood risk assessment, to the property survey, installation sign off and assessment of residual risk. Again, the initial draft documents will be put out to consultation amongst those on the wider contact list. The draft outputs will also form part of the final workshop during which they can be tested and verified by a range of practitioners, with opportunities for further dissemination explored.

6 Final Workshop and workshop report

A final workshop will comprise of those from the scoping workshop who will review the models of training and identify potential opportunities as well as barriers to the creation of a corpus of competent professionals.

References

Environment Agency. 2013. Climate Ready Case Studies to Support: Understanding User Needs. A report by Mott MacDonald for the Environment Agency. Not yet publicly available.

See: <https://www.mottmac.com/article/1128/climate-ready-uk-training-needs-assessment>

Harries, T. 2008. Feeling secure or being secure? Why it can seem better not to protect yourself against a natural hazard. *Health Risk Society* 10, pp. 479–490

Harries, T., Penning-Rowsell, E., 2011. Victim pressure, institutional inertia and climate change adaptation: The case of flood risk. *Global Environmental Change* 21, 188–197.
doi:10.1016/j.gloenvcha.2010.09.002

Kazmierczak, A., Bichard, E. 2010. Investigating homeowners' interest in property-level flood protection. *International Journal of Disaster Resilience in the Built Environment*, 1(2), 157-172.

Kazmierczak, A., & Connelly, A. (2011). *Buildings and flooding – a risk response case study*. The EcoCities Project, The University of Manchester. Available at:<http://www.adaptingmanchester.co.uk/documents/buildingsand-flooding-risk-response-case-study>

Lin, S., Shaw, D., Ho, M.-C., 2008. Why are flood and landslide victims less willing to take mitigation measures than the public? *Nat Hazards* 44, 305–314. doi:10.1007/s11069-007-9136-z

Soane, E., Schubert, I., Challenor, P., Lunn, R., Narendran, S., pollard, S., 2010. Flood perception and mitigation: The role of severity, agency, and experience in the purchase of flood protection, and the communication of flood information. *Environment and Planning A* 42, 3023–3038.
doi:10.1068/a43238

Appendix

1. Summary of tasks

TASK	
<p><u>Desk Based Survey of international and national Case Studies & Interviews:</u></p> <ul style="list-style-type: none"> • Literature review of existing surveying practices (drawing on the SMARTeST project and Defra Best Practice Guide) • Follow-up telephone interviews with selected international representatives. • Writing up case studies for final report <p><u>Desk-based review and selection of national case studies.</u></p> <ul style="list-style-type: none"> • Comparison of case studies • Select case studies for reporting • Draft and Proof case studies <p><u>Scoping Workshops & Analysis</u></p> <ul style="list-style-type: none"> - Arrange venue and organise attendance list - Facilitate workshop – powerpoint presentations - Draft structure for workshop - Content analysis of workshop notes (taken by project team) <p><u>Trainers Workshop & Analysis</u></p> <ul style="list-style-type: none"> - Arrange venue and organise attendance list - Facilitate workshop – Powerpoint presentations - Draft structure for workshop - Content analysis of workshop notes (taken by project team) <p><u>Webinar Development and Analysis</u></p> <ul style="list-style-type: none"> - Arrangements and organisation of attendance - Facilitate workshop – Powerpoint presentations - Draft structure for workshop <p>Content analysis of webinar outputs (taken by project team)</p> <p><u>Final Workshop & Analysis</u></p> <ul style="list-style-type: none"> - Arrange venue and organise attendance list - Facilitate workshop – Powerpoint presentations - Draft structure for workshop <p>Content analysis of workshop notes (taken by project team)</p> <p><u>Property Owners Guidance</u> (inc. consultation, rewriting and proofing)</p> <ul style="list-style-type: none"> - Stakeholder consultation - Drafting - Further consultations - Redrafting and proofing 	<p><u>Technical Guidance for LAs</u></p> <ul style="list-style-type: none"> - Stakeholder consultation - Drafting - Further consultations - Redrafting and proofing <p><u>Project management and dissemination</u></p> <p>General Project Management</p> <ul style="list-style-type: none"> - Circulating Meeting Minutes and Action Points - Financial Reporting - Steering Group Meetings - Project Board meetings <p><u>Project Presentations & Further Dissemination</u></p> <ul style="list-style-type: none"> - Policy briefing note - Presentation to the steering group - Launch event <p><u>Final report</u></p> <ul style="list-style-type: none"> - Assembling - Drafting - Proofing - Revising

2. Key milestones

Contract week	Date	Deliverable
Week 1	18 th June 2014	Project award
Week 3	30 th June 2014	Project steering group meeting (1)
Week 7	28 th July 2014	Inception report and role profile
Week 9	12 th August 2014	Project steering group meeting (2)
Week 10	22 nd August 2014	Case studies and draft competencies
Date TBC	September 2014 (date TBC)	Project board meeting (1)
Dates TBC	September to November 2014	Workshops
Week 25	24 th November 2014	Training route map and competency framework
Date TBC	January 2015 (date TBC)	Project board meeting (2)
Dates TBC	January 2015	Workshops
Week 40	27 th March 2015	Householders guide and Local Authority guide
Week 40	27 th March 2015	Final report

3. Flood risk management hierarchy

