

# Submission to NSW Independent Flood Inquiry

Byron Shire Council, May 2022

Terms of Reference	Issues	Recommendations
<p><b>The Inquiry is to consider and report to the Premier on the following matters:</b></p>		
<p><b>Causes and contributing factors</b></p> <p>1 a. the causes of, and factors contributing to, the frequency, intensity, timing and location of floods in NSW in the 2022 catastrophic flood event, including consideration of any role of weather, climate change, and human activity</p>	<p>Climate change is contributing to more frequent and more severe weather</p> <p>Aging infrastructure</p> <p>Superseded standards</p> <p>Human activity, land clearing, deforestation, insufficient riparian zone care and maintenance</p> <p>Inadequate funding to keep up with ongoing maintenance of infrastructure.</p>	<p>The fundamental cause of climate change in generating extreme flooding and other natural disasters should be integrated in policy at every level.</p> <p>Revise standards and strategic planning instruments</p> <p>Increase Betterment Funding for future proofing</p> <p>Recognise the IPCC rainfall and sea level predictions</p>
<p><b>Preparation and Planning</b></p> <p>1 b. the preparation and planning by agencies, government, other entities and the community for floods in NSW, including the accuracy and timing of weather forecasts, current laws, emergency management plans, practices and mitigation strategies, their application and effect</p>	<p>Recent and 2017 flooding has suggested that weather systems are acting in new ways that existing weather models do not understand and struggle to predict.</p>	<p>Discuss with BOM and provide guidance. Consider the need for BOM to provide different forecast products when or if there are unknowns in severe weather predictions to ensure agencies stay on high alert.</p>
	<p>Currently works under Part 5 (REF) processes now need to be referred to emergency agencies, but part 4 applications do not.</p>	<p>Consider if this requirement should be expanded to part 4 applications.</p>
	<p>Local flooding in last 10 years questions validity of the sizing of Annual Recurrence Intervals for rainfall volumes and intensity.</p>	<p>Investigate and provide advice. The 100 year flood event could be larger than we are currently predicting in Australian Rainfall and Runoff.</p>
	<p>A State Government Post Flood Analysis of Brunswick, Tallow and Belongil catchments is currently underway. A copy of this will be submitted to the Inquiry once finalised.</p>	<p>Support the review and its findings.</p>
<p><b>Response to floods</b></p>	<p>Public evacuation warnings were issued too late and multiple warnings were issued during non-waking hours – many residents were asleep and could not evacuate as the</p>	<p>Evacuation warnings need to be issued earlier and during waking hours.</p>

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<p>1 c. responses to floods, particularly measures to protect life, property and the environment, including:</p> <p>i. immediate management, including the issuing and response to public warnings;</p> <p>ii. resourcing, coordination and deployment, including with respect to the Australian Defence Force; and</p> <p>iii. equipment and communication systems</p>	<p>town had already been cut off and homes impacted. The first flood peak was 6.30am.</p>	
	<p>Public evacuation warnings issued by SES directed residents to an evacuation centre that was not operational. This resulted in extreme confusion and distress for residents as well as the informal, ad-hoc operation of the site.</p>	<p>SES needs to confirm that evacuation centre is operational, prior to issuing evacuation directives to residents.</p>
	<p>Evacuation centre at Mullumbimby Ex-Services Club was not operational because DCJ staff failed to arrive on site before the town was cut off and did not seek alternative access (e.g. police escort by boat).</p> <p>The site's Manager and 1 staff member catered to the needs of 300+ residents who had been forced to evacuate locally, with issues including:</p> <ul style="list-style-type: none"> <li>- No registration process, therefore no subsequent support available</li> <li>- No covid safety processes, therefore significant covid risk</li> <li>- No supply of bedding/blankets/dry clothes etc.</li> <li>- Limited supply of food/water</li> <li>- Inadequate safe access to the evacuation centre</li> <li>- No support for people with significant support needs, e.g. disability, covid-positive, significant distress, etc.</li> <li>- The centre itself was threatened with flooding</li> </ul>	<p>DCJ staff take precautionary approach to schedule arrival on site prior to flood impact/isolation of community. Alternatively, DCJ staff receive priority marine escort to evacuation centre in situations where site has been cut off.</p> <p>Preference that DCJ staff live locally.</p> <p>Identify an alternate or new evacuation centre, as the Mullumbimby Ex-Services Club is unsuitable in a flood.</p>
	<p>Extensive advocacy and escalation was needed before DCJ staff arrived 48 hours into the flood impact. However, the vast majority of centre attendees had already left due to the poor conditions and lack of resourcing and support.</p> <p>Anecdotal information indicates that many of these residents returned home to flood impacted properties (without an SES confirmation it was safe to return), despite the risks and discomfort, as it was preferable to their</p>	<p>Increased DCJ evacuation centre staffing surge capacity and meaningful collaboration with local communities to ensure safety of residents at operational evacuation centres.</p> <p>DCJ staff be empowered to be more flexible to respond during a disaster.</p>

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	<p>experience at the informal evacuation centre. Many were across the road at the Mullumbimby District Neighbourhood Centre and Civic Hall. DCJ staff refused to move their operations across the road despite being invited.</p> <p>DCJ staff then sought to close the site as soon as possible rather than establish effective communications regarding its operational status.</p>	<p>Local area community wardens be identified and trained be empowered to make decisions when other communications fail.</p>
	<p>During emergency events a number of agencies are acting in separation and only combined via the Local Emergency Management Committee (LEMC). This then relies on one person to disseminate information to each agency staff. In large events it is not possible for agency staff to stay up to date with warning, evacuations and more. Further lead agencies were not always in attendance at LEMC / EOC.</p>	<p>Investigate the appropriateness of an agency-wide solution such as the EMCOP used in Victoria or other solutions that allow improved and timely information sharing.</p> <p>Investigate a model such as that used by RFS in NSW to pull in state and local government employees to a separate command structure in an emergency. Ongoing training be funded by the State Government for this purpose.</p>
	<p>The deployment of ADF teams was slow, cumbersome and committed later than desired.</p>	<p>Early commitment of ADF teams to support responsible agencies should be investigated and pre agreed methods (including templates) developed to ensure methods of obtaining teams is known pre-event.</p>
	<p>Coordination of ADF operations in local communities was deeply problematic.</p> <p>The volume of needs on the ground made escalation through the LEMC prohibitively unwieldy. An online form was trialled (where members of the public could log support requests), however acceptance of the work, indicative timeframes and work completion was not reported back to residents or local organisations. This led to confusion, duplication and inefficiencies.</p> <p>To mitigate coordination inefficiencies, ADF personnel commenced working directly with local organisations, outside formal processes. This was effective in part, however it was challenging for ADF personnel to have a</p>	<p>Clear task coordination processes, supporting documentation and training developed and implemented in local communities.</p> <p>Clear communications between organisations about how to get assistance.</p>

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	<p>clear source of truth, critically assess or prioritise requests in the chaotic post-impact context.</p> <p>Community were not aware how they could access assistance from the ADF. The ADF were apparently told not to assist unless asked.</p>	
	<p>Council staffing for emergency event preparedness is currently at the choice of Councils and dependent on capacity and funding.</p>	<p>State or Federal funding should be provided, along with a level of direction to ensure Council have staff dedicated to ensuring systems and processes are maintained and available at all times ready for events. This includes staff training in the use of the systems.</p>
	<p>Despite Council being proactive in this space community still have limited awareness around agency roles and how to access information.</p>	<p>Wider state level education and the EMCOP noted above could help improve this scenario.</p>
	<p>Flood sirens were investigated as part of a recent Floodplain Management Plan but were not supported.</p>	<p>Consider the support of sirens as a future response mechanism to support current messaging systems.</p>
	<p>Internal communications in hinterland areas or when landline or mobile networks fail.</p>	<p>Could Council's access the emergency services radio communications network rather than needing to develop its own radio network.</p>
	<p>Wide-scale communications failure exponentially compounds the challenges of responding to flood impacts. For example, Mullumbimby township had no phone communication, no internet (and therefore no EFTPOS available for people to purchase food/water during temporary period of water insecurity) for approximately 1 week following the flood impact.</p>	<p>Identification of local or broader approach to back up communications infrastructure.</p>
	<p>Immediately after the flood Council were struggling to obtain specialist geotechnical advice to open roads impacted by landslips. Most consultant engineers were isolated from Council due to highways being flooded. A number of government organisations had geotechnical engineers driving around or flying in helicopters looking at landslips on private land. Despite requests via LEMC none</p>	<p>Various opportunities to investigate:</p> <ul style="list-style-type: none"> <li>• Flood proof highway access</li> <li>• Require government organisations to support Council for urgent inspections and create a process to request the support via LEMC.</li> </ul>

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	would help Council and this prevented roads being opened to community but also emergency services.	<ul style="list-style-type: none"> <li>Provide Council with access to helicopters to fly our own specialists to the shire.</li> </ul>
	<p>No mobile coverage or internet access available at the evacuation centre due to damaged network.</p> <p>Phone was busy with worried relatives looking for people. No line clear for emergency communications.</p> <p>Issue - During the second flood no information was available during the event, even though other non-government sites had it.</p>	BOM is supported so that it can have up to date information
	SES had inadequate volunteers to perform the necessary rescues.	SES be supported to recruit more volunteers and work more closely with other organizations to make up for the shortfall.
	SES communications were incorrect telling people to access Mullumbimby Evacuation Centre via the Pacific Highway, effectively directing people into flood water.	Ensure local knowledge is included that is safe and correct
	One of the reasons DCJ said they could not get to the evacuation centre was the road access available was via Saddle Rd and Saddle Rd is gravel in parts and they are not insured to travel on gravel roads during weather events.	Funding be made available for road maintenance or upgrades to ensure emergency access is safe and available.
<p><b>Transition from incident response to recovery</b></p> <p>1 d. the transition from incident response to recovery, including the roles, structure and procedures of agencies, government, other entities and the community</p>	<p>Transition from response to recovery was unclear and not communicated well between/within agencies e.g. SES. This led to ineffective communication with communities about how to progress requests for support.</p> <p>Agencies were in different modes at the same time. Tweed/Byron EOC remained active for a period of time after Lismore EOC had already moved to Recovery. SES moved to Recovery for both EOC s causing confusion.</p> <p>Some communities were still in incident response phase, yet formal recovery stage commenced (e.g. isolated hinterland communities).</p>	<p>Clearer communication processes within and between agencies, with implications of transition to recovery stage well understood by each agency.</p> <p>Agencies are represented at EOC until officially closed and officially Recovery stage reached. Improved training to EOC representatives for role clarity during declared events or activation.</p>

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	<p>Inadequate human resourcing surge capacity in agencies responsible for recovery phase, e.g. Resilience NSW, local councils, particularly in a wide-scale, catastrophic event.</p> <p>Local councils have a significant role in recovery and additional human resourcing is needed instantly. However, in order to claim expenses under the DRFA, councils need to either recruit external people or redeploy and backfill staff – this doesn't align with operational time demands.</p>	<p>Establish state-wide pool of upskilled staff from areas of state government operations that do not experience frontline impacts, and can be deployed, during large scale disaster events.</p>
<p><b>Recovery from floods</b></p> <p>1 e. recovery from floods, including:</p> <ul style="list-style-type: none"> <li>i. immediate housing, clean-up, financial support and community engagement measures; and</li> <li>ii. longer-term community rebuilding support</li> </ul>	<p>Immediate housing options completely inadequate</p> <p>Housing options lacking for community members experiencing homelessness prior to the flood, despite their dwellings being impacted.</p> <p>Clean up of residents' homes led by community members/spontaneous volunteers, therefore wide-spread risk issues, including health and safety, asbestos management, insurance/legal requirements and trauma awareness.</p> <p>Applications for financial support slow to receive approval – many still waiting on outcome of applications.</p>	<p>Request telecommunication carriers build more resilient networks and have surge capacity in repair technicians. The major NBN outage for the region could have been avoided if multiple network paths were available for internet access rather than a single connection point at Woodburn.</p> <p>Consider funding to have portable satellite-based communications services on standby, stationed at community hubs like local halls. These could be used for immediate support in the operations of emergency response centres or other emergency work hubs. Equipment examples include satellite phones and satellite internet services such as Starlink.</p> <p>Scenario planning for surge housing capacity utilising diverse sites and good practice processes.</p> <p>Increased Temporary Accommodation surge capacity through DCJ processes.</p> <p>Inclusion of people experiencing prior homelessness in all housing responses.</p> <p>Resourced coordination of spontaneous volunteers.</p> <p>Process improvement.</p>

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	<p>Not enough rated flood gauges. Byron has two SES flood-rated gauges and this is not enough.</p>	<p>SES need to partner with Council to rate all flood gauges to ensure community can understand what water levels mean at each gauge. Funding will be needed to support this action to happen.</p>
	<p>Staff education on disaster funding sources, systems, methods and what is fundable, etc.</p> <p>(Additionally for businesses) Funding support information and dissemination delayed due to internet and phone issues.</p> <p>Too much documentation required for some business grant applications and requirement for businesses to pay for certain goods and services then request reimbursement via business grant once over certain amount of grant request not feasible for many businesses- lack of cashflow and difficulty accessing documentation for various reasons; phone and internet connectivity, lack of ID, overwhelm etc</p> <p>Lack of financial support options for workplace visa holders</p>	<p>Council's should receive a level of education annually to refresh current staff and educate new staff.</p> <p>Reduce red tape and proof of upfront documentation, improve phone and internet connectivity.</p> <p>Consider financial support options for workplace visa holders</p>
	<p>Flood waste collection:</p> <p>Lack of timely direction from EPA on management of hazardous waste such as asbestos amongst other flood debris</p> <p>Lack of landfill sites within the region capable of accepting volumes of asbestos</p>	<p>Planning for emergency management of asbestos at EPA level with clear guidance and assistance for local Councils on how to handle this amongst large volumes of flood waste on the kerb</p> <p>Future sites and landfill cells approved for this purpose</p> <p>Temporary waste transfer sites identified and pre-approved for the purpose of quick and efficient waste removal from flood affected properties</p>

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	<p>Local waste transfer station overwhelmed with the volume of waste in the initial week, and forced to close to the general public</p> <p>Disposal of recoverable materials as waste resulting in much more waste going to landfill than is necessary</p> <p>Community led groups wanting to help with no real mechanism for this to occur</p> <p>Timely advice as to whether “building waste” would be covered under Natural disaster funding arrangements</p> <p>Clarity and clear communication between ADF and Council during clean up phase – multiple points of contact and no follow up</p> <p>Service NSW portal – residents advised to apply for assistance for ADF and other support in cleaning up their properties and businesses and no follow up / closure. After several weeks request referred to Council after which Contractors had finished clean up efforts.</p> <p>Clean up of creek systems and private properties whereby landslips have occurred or debris washed from other areas onto private land</p>	<p>Communications and education to be developed on the type of material that can be salvaged, keeping whitegoods, hazardous materials and salvageable materials separate. Funding and focus for resource recovery programs at the kerbside</p> <p>Community groups empowered to salvage and repair goods and materials for return to owner or those in need with financial support to do so and / or to assist</p> <p>Clarity at State level on definition and funding for building and demolition from properties affected by natural disaster</p> <p>Scope of what ADF can assist with and how including available resources with direct communication to the manager of the clean up team to avoid multi agency cross over and a more coordinated approach</p> <p>A fit for purpose disaster response team created within the ADF.</p> <p>Better management of the portal if this is the mechanism to be used</p> <p>Program developed and replicated to deal with this type of waste and situation. Recognition that creek and other waterways will be affected as well as navigable rivers</p>



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	<p>ADF offering support in the form of people power only, in situations where plant and equipment was far more efficient</p> <p>Public Works engaged Contractors failure to deliver on clean up tasks and communicate resulting in distressed residents and increased workload for Council staff</p> <p>Lack of early recovery phase advice at state level in clean up</p> <p>Competition for Contractors and freight both across internal departments and across neighbouring Councils.</p> <p>Highway blockages resulting in inability for any waste to be transported to a licensed landfill</p>	<p>Greater understanding and appropriate resourcing to assist in the clean up.</p> <p>Pre existing contracts for emergency waste management with clear Contract KPIs and expectations to be delivered.</p> <p>Service NSW / Public Works single point of contact as soon as soon as recovery phase commences to provide advice with oversight of plan at regional level</p> <p>Improved regional coordination of resources</p>
<p><b>Any other matters</b></p> <p>1 f. any other matters that the inquiry deems appropriate in relation to floods</p>	<p>The recently announced betterment fund is great way of planning to be more resilient to the next disaster event.</p>	<p>This should not be a one off and ideally form part of the disaster funding processes already in place. This ensures moving forward we can rebuild with suitable assets rather keep rebuilding assets that risk failure in future events.</p>
	<p>Many people lost their cars in the flood, or abandoned cars on roads seeking higher ground to avoid flood damage.</p>	
<p><b>And to make recommendations arising from the Inquiry as considered appropriate, including on:</b></p>	<p>Audit of assets that have been repaired numerous times, due to repeated flood or landslip damage.</p>	<p>Consider the need to complete audits post event to highlight repeat asset repairs and highlight assets that require betterment.</p>
<p>2 a. safety of all emergency service personnel and community first responders</p>	<p>Community first responders participated in activities with high levels of risk to both physical and psychological safety, including hiking into dynamic, isolated disaster-impacted</p>	<p>Funding for training and resourcing community first responders.</p>

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	<p>areas, rescuing residents, obtaining/storing/distributing supplies including fuels, etc.</p> <p>In one instance, community first responders located a deceased person during operations to a disaster-impacted area.</p> <p>First responders also took an active role in early stage cleanup e.g. demolishing flood-impacted housing elements (walls/flooring/kitchens, etc), which carried significant risk involving health and safety, asbestos management, insurance/legal requirements and trauma awareness.</p>	
2 b. preparation and planning for future flood threats and risks	<p>Lack of first responder/spontaneous volunteering coordination and support by a trusted local organisation.</p> <p>Local organisations that previously oversaw spontaneous volunteering were defunded (cessation of community hub funding) in June 2021 and this systemic gap significantly increases risk associated with spontaneous volunteering during an event.</p> <p>Funding for infrastructure, community resilience and planning</p>	<p>Reinstatement of community hub funding, or similar, to local organisations for the purposes of spontaneous volunteer coordination.</p> <p>Reestablishment of spontaneous volunteering processes in community.</p> <p>Establish a team of community volunteers that have some basic training and appropriate insurance</p> <p>Resilience not only reduces long term costs and damage in future events it also reduces the impacts to community during future events. Recommend increased dedicated funding for the upgrade of infrastructure to more resilient infrastructure at any time. It should not only happen post disaster, if justified. Funding should be 100% to ensure it is not reliant upon Council funding ability.</p> <p>Support establishment of community lead resilience networks</p> <p>Insurance costs/insurability of properties – impact on property owners unable to secure flood insurance</p> <p>Insurance Industry practices and support to property owners</p>

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2 c. use of flood gauges and other warning structures and/or strategies for improved flood prediction	Separate, adequate funding for the maintenance and upgrade of flood warning systems built, maintained and funded by Council continues to be difficult against all of Councils funding needs and desires.	Appropriate and dedicated annual state funding in two streams; maintenance and upgrade for warning systems is desired. Upgrade would also allow for improving accuracy of warning models and the installation of cameras which the community could view at road crossings etc. As requested in inquiry public meetings.
2 d. impact on essential services, including electricity supply, water supply and telecommunications	Council funds and provides a permanent team of labour and associated plant to maintain the drainage and related flood and storm water shire-wide infrastructure and provide ongoing monthly performance reports	Support from state government
2 e. land use planning and management and building standards, including:  i. the instruments, policies and programs applying to existing development in flood prone locations across NSW; and  ii. the instruments, policies and programs applying to proposed future developments in flood prone locations across NSW	<p>The <a href="#">Standard Instrument—Principal Local Environmental Plan</a> (SI LEP) governs land use zoning for all councils in NSW. Currently the SI LEP does not contain a single hazard zone. This year’s catastrophic flooding in the Northern Rivers region created significant land slips across the Byron Shire rural hinterland, with certain areas still inaccessible (by road) and potentially uninhabitable in the future. It is important that the inquiry TORs include a review of the need to introduce one or more appropriate hazard zones in the SI LEP, so that such areas are clearly off-limits to incompatible land uses in the future.</p> <p>The new mandatory 'flood planning' clause inserted into all council LEPs (in July 2021) applies to land within the “<i>flood planning area</i>”, which in Byron Shire captures land affected by the 1:100yr ARI event with allowance for projected climate change to the year 2100. In light of this year’s catastrophic flooding in the Northern Rivers region, it is important that the inquiry TORs include a review of minimum flood planning standards for those areas most severely impacted (eg. Lismore, Mullumbimby, Ballina). This should form part of a broader review of the NSW Government’s Flood Prone Land Policy, as set out in the NSW Floodplain Development Manual.</p>	<p>That the TORs include a review of the need to introduce one or more appropriate hazard zones in the SI LEP, so that such areas potentially/physically affected by landslip are clearly off-limits to incompatible land uses in the future.</p> <p>State to coordinate and undertake necessary risk assessments of land affected by landslip and prepare hazard overlay mapping (eg. Coded red - acquisition, amber, green)</p> <p>Building height limits may need to be reviewed to allow flood proofing of existing properties</p> <p>State driven building standards required for flood compatibility and servicing</p> <p>That the TORs include a review of minimum flood planning standards for areas most severely impacted by catastrophic flooding in Northern Rivers Region; AND that this form part of a broader review of the NSW Government’s Flood Prone Land Policy, as set out in the NSW Floodplain Development Manual Investigate more proactive awareness or declaration of natural hazard constraints on property during purchase/change of land owner</p>

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		Flood Planning Levels based on risk assessment of catchments
2 f. appropriate action to adapt to future flood risks to communities and ecosystems	<p>Community-centred adaptation and resilience requires a collaborative, ongoing community development approach, yet this is not well-resourced.</p> <p>The cost burden of establishing ongoing Disaster Resilience Officers falls to individual councils and can be prohibitive, as post-event recovery roles are funded for 2 years only.</p> <p>Buildings that are not adaptable</p>	<p>Fund Resilience Officers, and associated operational resourcing, for all NSW Councils to ensure a community-centred approach to resilience.</p> <p>Adequate planning and budgeting for adaptation and betterment.</p> <p>Consider a mechanism to not allow concrete slab construction in the floodplain and other design considerations that are not adaptable.</p> <p>Improved active management of waterways required to minimise blockages and maintain healthy banks</p>
2 g. coordination and collaboration between the NSW Government and the Australian Government	Lack of clarity about state/federal agency roles (e.g. Resilience NSW as compared to the NRRR) and duplication of local presence.	Clarification and communication to local councils about scope of work, alignment and differentiation between ResNSW and NRRR.
	<p>Federal outreach service delivery (Services Australia mobile bus) was too rigid to integrate with other outreach support or respond to community need.</p> <p>The Services Australia bus had mandated locations and times that were issued by federal staff under Ministerial direction, who were unwilling to coordinate or align with state-based services or locally planned outreach. This created confusion and inefficiency for local communities, disrupted attempts to enable a 'one-stop shop' and was not person-centred.</p>	Collaboration between Federal and State services in response to local community need.

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2 h. coordination and collaboration by the NSW Government with other state and territory governments and local governments	Lack of consistency and clear communication from Res NSW regarding planning and implementation of Recovery Centre and outreach planning.	Increased Res NSW surge capacity to enable consistency of personnel deployment to impacted areas.
	Voluntary House Raising and Purchase scheme are very hard for Council to fund and make happen. The expenditure also doesn't save Council money in the future, it saves government and insurers money and protects communities' wellbeing and houses.	A new funding model is urgently needed to 100% fund Voluntary House Purchase schemes and provide 50% of funds to land owners towards the costs of Voluntary House Raising.
2 i. public communication and advice systems and strategies	Refer to comments on this in responses above	