

Taking a Strategic Approach to Investment in FCERM

North Yorkshire Case Study

Draft Investment Plan (v3 – 31.08.12)

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Preamble

North Yorkshire County Council (NYCC), as a Lead Local Flood Authority (LLFA), has offered to be a case study for Defra's R&D project (FD2656) which is examining strategic Investment Planning in flood and coastal risk management (FRM). One of the aims of this research is to develop a mock or preliminary "Investment Plan" for each case study in order to test ideas and develop a potential template(s) for use by other LLFAs and their partners. This Plan was produced by the research project team, which included JBA Consulting, Mark Young at NYCC and Adam Tunningley of the Environment Agency Asset Systems Management Team Leader. The final approval of the content of the draft Plan resided with North Yorkshire County Council.

The Investment Plan sets out which FCRM schemes could be funded and how. It includes schemes related to all sources of flooding within NYCC. The Plan's focus is on the short term (i.e. next 3 years). This decision was taken in part because of the lack of data on potential investment choices beyond this, but also to focus limited project resources in the most useful way. It should be noted that this "mock" or preliminary Plan has not benefitted from wider input and review – this will be vital for any "real" Investment Plan to succeed.

Refer to the main R&D report (FD2656) for further information about the research.

Executive Summary

Context

This Plan and Executive Summary are presented by the Lead Local Flood Authority in order to provide decision makers and investors in flood and coastal risk management (FCRM) in North Yorkshire with a concise insight into the viable local FCRM improvement opportunities and how they might be funded.

The LLFA is supported by a FCRM partnership group (North Yorkshire Flood Risk Partnership - NYFRP). The group has decided that a multi agency programme of FCRM should be promoted where possible. The only present exception is water company schemes and this Investment Plan reflects this. The Plan therefore draws from numerous sources when compiling a list of potential FCRM schemes but does not summarise any individual strategic assessment. It draws findings from them and should inform future updates of such strategic assessments.

Scale of the problem

In North Yorkshire there are in the region of 34,000 properties at risk of flooding or coastal erosion if capital investment (including asset renewals) is not made. It should be noted that this assessment ignores the long term increasing threat that climate change is likely to bring.

The NYFRP has a list of FCRM schemes that they would like to implement in the short term (next 3~5 years). These would reduce the risk to 5,300 properties, 4,100 of which are along the Scarborough BC coastline. The remaining 1,000 properties are in small towns dispersed across the county and relates to flooding from larger watercourses.

Flood Risk Management Funding Framework

Central Government Flood Defence Grant in Aid (GiA) is the major funding source and this is accessed in accordance with [Defra's "Partnership Funding" policy](#). At present, £160million pa is invested by government through FDGiA, with a further £30million from Regional Flood and Coastal Committees (RFCC) through Local Levy, and £25million from "partnership funding". Government policy is for the latter to grow significantly and the rules for accessing FDGiA have been adjusted to assist this.

LLFAs (and other flood "Risk Management Authorities") are required to submit an annual Plan, referred to as the Medium Term Plan (MTP), to the Environment Agency. This plan indicates whether FDGiA is sought and provides the key information needed for the Agency to assess what, if any, level of FDGiA support is possible. This assessment includes the performance of the scheme in delivering against Defra [Outcome Measures](#). A "Sanctioned List" is then [published](#) for each region determining the allocations. RFCC have an important role to play. They are the key decision makers in terms of support for the MTP and can also influence which scheme FDGiA is to provide support once funds are allocated within the region.

Therefore, the priority is to find local funds to support bids for FDGiA – use the carrot of FDGiA to lever in local funds. There is a community engagement and political process too. Local priorities need to be established, communicated and adhered to. Also, where schemes are not likely to be supported by RFCC and FDGiA then this needs to be clearly communicated to the local community and relevant authority. With technical support from NYFRP, this enables them to take local ownership of the issue. The process of identifying and prioritising FCRM activity is to be captured

in by the LLFA in their Local Flood Risk Management Strategy, as required under the Floods and Water Management Act. This Strategy is currently under development and this initial Investment Plan should help inform its development. The Investment Plan will need to be revisited on completion of the Local Strategy and annually thereafter, as a minimum, to support the MTP process.

What can be achieved in the short term

In simple terms, North Yorkshire has two choices – attempt to find funding to deliver what is ideally needed or “fall back” to a conservative programme of investment. Consultation is needed to explore the former before considering accepting the latter.

There is a £73million capital requirement to implement the full list of schemes that are considered to be needed in the short term. This would benefit 2331 households and encourage sustainable development across North Yorkshire. But significant additional funds need to be found to secure these benefits. To date £10million of local funding has been identified, supplemented by a further £1.6million in council and Local Levy funding.

Based on current FDGiA bidding conditions (a FDGiA Partnership Funding score threshold of 180%), this Partnership Funding could lever in £0.8 million of FDGiA and fund 5 schemes. This leaves a potential £63 million shortfall required to fund the remaining 16 schemes. This is a challenge and may prove too ambitious. But consultation is needed on this first – so that the representatives of the communities at risk are engaged and the funding opportunities, scheme options, timing, local economic benefits and beneficiaries are all explored in more detail before this Investment Plan is revisited and updated.

A “fall back” programme of investment has been developed and presented below. This is far less ambitious and includes:

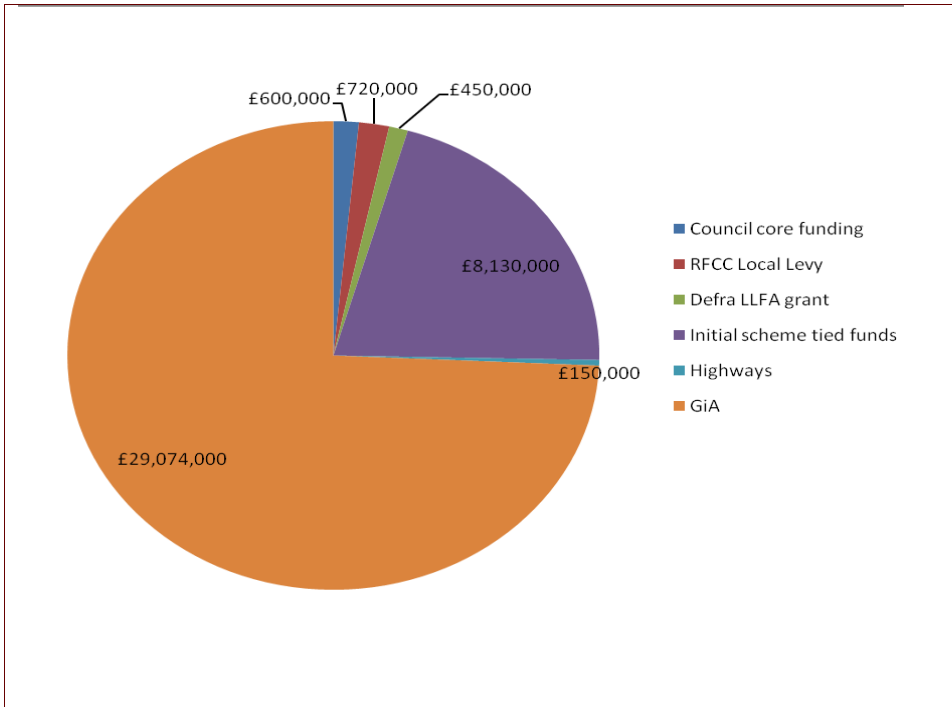
- 15 schemes delivered within 3~5 years with £40m capital cost
- £10m local and £30m FDGiA investment
- Benefitting 1060 households

However, the wider economic benefits of the full programme compared with the fall back programme need to be explored. Also, within any investment programme there are key choices on where flexible local funding is invested. For example, the “fall back” programme is based on an investment strategy that seeks to include a range of smaller and more easily fundable schemes across the County rather than focussing on those which are likely to deliver higher “Outcome Measures” and attract FDGiA. For the same local investment an alternative approach could deliver an additional £10m of FDGiA and see a further 477 households benefit from FCRM investment. Transparency on this issue is important. The “losers” in this approach are at Scarborough. The winners are schemes in the Selby Area IDB. Also, the “technical” approaches seeking best value or wide distribution of investment can ignore recent flood history and local politics. For example, neither of the approaches referred to above would result in the funding of a scheme at Thirsk.

Where will the local funding in the short term to come from?

In the short term (next 3 to 5 years) it is expected that the majority of local partnership funding will come from the following sources for the fall back investment plan. The light blue part of the chart is where significant effort is expected in order to secure the programme.

Figure ES1: Target Funding Mix to Deliver Short Term Schemes, fall back plan (£k)



Key actions to secure future investment

Based on the “fall back” short term programme being accepted and delivered, the medium term (say 2015 to 2025), will probably require £2.2 million of annual capital investment, with a gradually reducing percentage from FDGiA appearing likely. Plans and funding mechanisms should be put in place at district level to ensure an appropriate standard of FCRM funding is provided to local communities. This is particularly pertinent at:

- The Scarborough BC coastal erosion locations
- Selby Pickering Scarborough Harrogate, Norton, Tadcaster, Ripon and Masham where flood risk could jeopardise regeneration plans
- Selby IDB, where existing assets will need replacing

Table ES1 – Indicative Financing of Schemes for Delivery

Scheme ID	Scheme Name	Project Cost	Scheme tied fund	Central funding	Realised GiA
NYCC1	Pickering - Pickering Beck Upland Storage Scheme	2,100	1,250	£850k	£k
NYCC16	Milby Island and Langthorpe Boroughbridge PLP	149		£78k	£71k
NYCC17	Hemingbrough - Goule Hall Pumping Station Refurb (River Ouse)	25	14	£k	£11k
NYCC18	Hemingbrough - Hagthorpe Pumping Station Refurb (River Derwent)	22	12	£k	£10k
NYCC20	Scarborough South Bay Visioning Study	120		£k	£120k
NYCC25	Robin Hoods Bay Appraisal and Seawall Works	650		£k	£650k
NYCC26	Robin Hoods Bay Appraisal and Drainage Works	265		£k	£265k
NYCC31	Whitby Harbour and West Cliff Coast Protection Works	24,900		£k	£24,900k
NYCC51	Runswic Bay Appraisal and Works	2,500		£k	£2,500k
NYCC55	Snaith - Coates Marsh Pumping Station Refurb (River Aire)	262	144	£118k	£k
NYCC56	Wistow - Wistow Clough Pumping Station (River Ouse)	1,462	804	£381k	£278k
NYCC57	Airmyn - Little Airmyn Pumping Station (River Aire)	1,144	629	£75k	£440k
NYCC58	Sherburn in Elmet - Bond Ings Pumping Station	258	142	£117k	£k
NYCC59	Temple Hirst Pumping Station	1,581	870	£176k	£535k
NYCC60	Barnby on the Marsh - Lendall Pumping Station	618		£k	£618k
	Totals	36,056	3,865	1,795	30,398

The longer term

There are numerous potential schemes that are not being put forward as part of the short term investment plan, but which could form part of the medium to long term investment process. A number of these are specifically related to future development and will be linked to the growth in terms of funding. Other schemes require further viability investigation into their costs and related benefits. Discussions with key partners and any potential beneficiaries will be essential when moving forward with any potential medium and long-term schemes.

1. Context

Leadership

As Lead Local Flood Authority (LLFA) under the terms of the Floods and Water Management Act, North Yorkshire County Council (NYCC) has a responsibility to provide leadership on matters relating to flooding within its boundaries. As part of this, NYCC has developed this Investment Plan to assist in the planning and delivery of schemes to reduce the probability and/or consequences of flooding and coastal erosion.

Scale of FRM problem

In North Yorkshire there are in the region of 34,000 properties risk of flooding or coastal erosion if capital investment (including asset renewals) is not made. It should be noted that this assessment ignores the long term increasing threat that climate change is likely to bring.

Inland flood risks are commonly main river flooding in small towns e.g. Skipton, Pickering and Thirsk. FRM schemes in these locations traditionally have struggled to get off the ground due to modest economic benefits and strong competition in obtaining FDGiA. The new partnership funding arrangement could represent an opportunity to at least obtain some FDGiA, supported by local contribution.

North Yorkshire also has coastal erosion and tidal flooding problems. The coastal erosion locations stretch across much of the Scarborough BC / North Yorkshire CC coastline. These schemes typically have a much higher cost benefit ratio than the smaller main river schemes and can benefit relatively large centres of population (e.g. Scarborough).

There are some local flood risks across many parts of the country, but these individual locations affect a small number of properties and are not significant enough to feature on any current short/medium term Investment Plans. These schemes should be packaged up with the indicative costs, benefits and funding options, then integrated into the long term Investment Plan. Smaller scale options such as property level protection seem to be appropriate for this type of localised flooding.

FCRM funding and aim of the Investment Plan

Defra introduced Resilience Partnership Funding for FCRM in May 2011. The new partnership policy means that Government money (Flood Defence Grant in Aid) is potentially available to meet the costs, partially or in full, of any worthwhile scheme, instead of meeting the full costs of just a limited number of schemes. The level of funding is now based on the desired [Outcome Measures](#) being delivered.

LLFAs now have a leadership role to oversee the delivery by all Risk Management Authorities in their area, and to support this, they are required under the FWMA to produce a Local Flood Risk Management Strategy (Local Strategy). A Local Strategy will need to grasp the opportunity to align stakeholders, particularly those with available funding, with those who would benefit from further investment in flood risk management. Within this process, developing options for investment will need to test the local appetite for reducing the risk against willingness to meet any additional costs not covered by central government support via Flood Defence Grant in Aid. With money comes influence: local democracy and engagement is vital. But the policy change is set against a backdrop of limited resources and low economic activity.

Hence, the Local Strategy will require a strategic Investment Plan to ensure funding will be available to support the management of flood and coastal risks. In essence, the purpose of the Investment Plans would be to assess the challenges of funding local FCRM projects, balancing the benefits of tackling each source of risk over time against the national and local costs of doing so. In explicitly trading-off appetite for risk against investment costs and affordability, it is hoped that the resulting local Investment Plan will create:

- Good engagement amongst key decision makers, partners, communities and other stakeholders.
- More effective and transparent prioritisation between competing projects throughout the county / district / borough and also between projects tackling different sources of risk (e.g. EA vs. local authority).
- A compelling business case for external contributions and other local investment, by showing that relatively small amounts of local investment over time may have a big impact in terms of long-term residual risk for each sector and area, with implications for property and land values, and insurability.

A Local Strategy is currently under development and this initial Investment Plan should help inform its development. The Investment Plan will need to be revisited on completion of the Local Strategy and annually thereafter, as a minimum, to support the MTP process (see below).

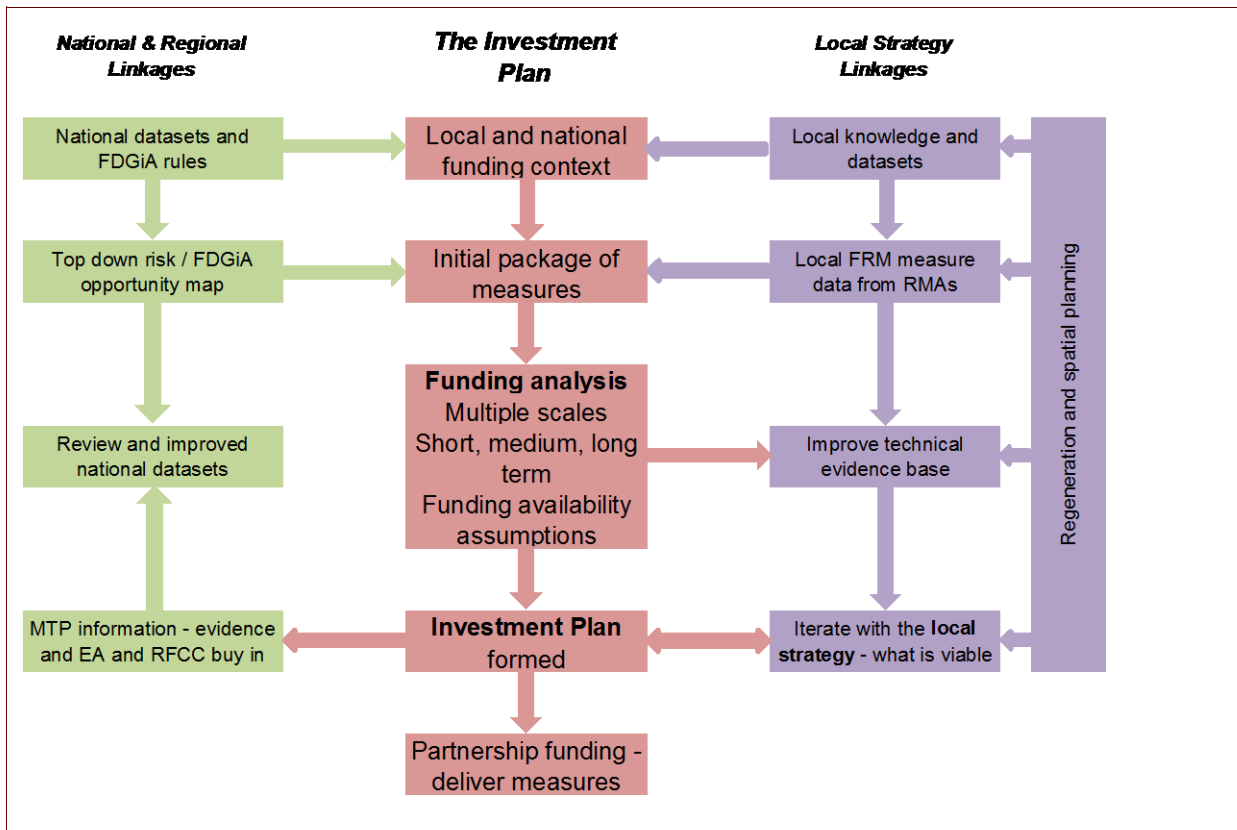
LLFAs (and other flood “Risk Management Authorities”) are required annually to submit a list of potential schemes, referred to as the Medium Term Plan (MTP), to the Environment Agency. It also provides the key information needed for the Agency to assess what, if any, level of FDGiA support is possible. This assessment includes the performance of the scheme in delivering against Defra [Outcome Measures](#). A “Sanctioned List” is then [published](#) for each region determining the allocations (refer to the “Yorkshire” programme in the web link for the current schemes likely to attract FDGiA). This includes a list of schemes that have FDGiA allocated to them, or are likely to have FDGiA allocated to them, for the next 5 years

RFCC have an important role to play. They are the key decision makers in terms of support for the MTP and can also influence which scheme FDGiA is actually to provide support once funds are allocated within the region.

Therefore, the priority is to find local funds to support bids for FDGiA – use the carrot of FDGiA to lever in local funds. There is a community engagement and political process too. Local priorities need to be established, communicated and adhered to. Also, where schemes are not likely to be supported by RFCC and FDGiA then this needs to be clearly communicated to the local community and relevant authority. With technical support from NYFRP, this enables them to take local ownership of the issue.

The process of developing an Investment Plan in tandem with a Local Strategy is presented in Figure 1 below.

Figure 1 – The formation of an Investment Plan



Current MTP / Sanctioned List

The latest MTP for NYCC currently has schemes that would benefit 5300 properties. 4100 of these are along the Scarborough BC coastline. IDB schemes include benefit to 160 properties, but many of the individual schemes are purely focussed on land drainage to sustain agricultural production. The remaining 1000 properties benefitting are for main river schemes in small towns dispersed across the county. There are no local flood risk schemes on the current list due to the low risk and low number of properties required to justify a scheme.

Local flood risk organisation and partnerships

NYCC has developed partnerships at a sub-regional level to enable coordination with the other strategic partners in flood risk management, e.g. the EA and Yorkshire Water (YW).

As LLFA, NYCC also leads a formal multi-agency technical group to deal with locally specific flood and coastal erosion issues, drainage and planning issues and the development of their Local Strategy. This is the North Yorkshire Flood Risk Partnership (NYFRP) and this group meets every three months prior to the RFCC meetings.

Within the Yorkshire Regional Flood and Coastal Committee (RFCC) there are three of these sub-regional strategic flood risk partnerships (North, South and West Yorkshire with a further one for East Yorkshire in progress). A Steering Group comprised of representatives of the RFCC, EA, Local Government (Yorkshire and Humber) and Yorkshire Water oversee the project at a regional level and reports to the RFCC. These partnerships and RFCC oversight allow for a strategic understanding of flood risk and ensures that partners collaborate in FCRM investment.

NYFRP are developing a joint FCRM works programme and flood prioritisation method to submit to the RFCC for funding applications (based on risk and the availability of funding). See Appendix C for the allocation process.

Sources of “Partnership Funding”

Funding within a “Two Tier” Setting

North Yorkshire is a two tier authority, this presents a challenge when it comes to Partnership Funding. The district councils need to set policies now in order to access some funding sources such as S106 and CIL. Coordinating and working with seven different local authorities (LAs) will be difficult. Each LA will have their own time scales, each has a different investment priority and some will have access to funds that others do not. Establishing communication lines and maintaining them is vital for the LLFA to function successfully.

In addition to the challenges of working with various districts, due to the distance between urban settlements in the mainly rural North Yorkshire it is not easy to “pool” flooding problems in adjacent communities and therefore also share funding routes for schemes. If this were possible, it can offer advantages in terms of maximising overall access to funding. But this is generally not seen as viable.

North Yorkshire main development agenda centres on sustaining existing communities. Large scale development led projects (e.g. a new town) are unlikely and this means that developer led funding opportunities are likely to be more piecemeal. Unless Community Infrastructure Levy or similar strategic funding arrangements can be implemented then any FCRM funding realised through development opportunities is likely to be gained through local S106 agreements, with the associated spatial limitations. However, a beneficiary mapping exercise for NYCC would help identify key potential funding partners.

Yorkshire Water (YW) is a member of the NYFRP and schemes coming from their PR14 Investment Plans will be entered on the joint FCRM works programme. YW is keen to collaborate but are presently constrained by when and what they can fund. There are signs that YW will be able to fund a wider range of schemes in the future if OFWAT outcome measures are relaxed. The NYFRP are looking at ways in which YW can access funding for multiple flood source schemes. For future revisions of the joint FCRM works programme, YW will be able to provide information on schemes where there are multiple benefits and where they may be able to invest (i.e. schemes that deal with surface water runoff entering the sewerage system).

Parts of North Yorkshire are covered by two IDBs, the Selby Area IDB and the Ouse and Derwent IDB. The IDBs have their own Investment Plans to fund schemes that protect farmland and properties and are therefore not considered in detail herein. It is assumed that RFCC will consult with NYCC prior to granting local levy to IDBs, as this would draw down potential amounts available for projects promoted by others.

Timetable, Bidding and the MTP

In 2012, Local Authorities were required to submit potential FDGiA schemes by 15 June, and it is likely that a similar deadline will emerge next year. Appendix C shows the process steps identified by the NYFRP partnership for promoting schemes for FDGiA.

Following the conclusion of the Investment Plan process, and through discussions with the NYFRP and RFCC, it may be appropriate to review the current Sanction List and current local funding allocation priorities.

2. FCRM Improvement Opportunities

Identification process

Opportunities were drawn from the existing joint NYFRP programme, LLFA knowledge and also through assessment of national datasets. A total of 66 potential schemes have been identified in North Yorkshire. These are included in full in Appendix A.

The schemes were collated into **short** (next 3 years), **medium** (3 to 15 years) and **long term**. The focus of this first version of an Investment Plan is on the short term, but consideration is also given to what action is needed now in order to facilitate funding of future schemes.

Of the 66 schemes, 21 were identified for assessment as a short term package of schemes to be implemented (see Table 1). The Investment Plan has explored the funding viability of this package of schemes.

When establishing the list of short term schemes the following filtering criteria were used:

- Is a large cash shortfall to get the required Outcome Measure score to attract FDGiA?
- Is the OM score very low (scheme options probably need reviewing)?
- Is the scheme a low priority to the NYFRP?

The full list of the schemes has a total cash cost of £300 million and the cash cost for the short term schemes is £70 million, still a very ambitious target. Note that four schemes in Table 1 account for over £50million of the total.

Local politics and priorities:

Many of the schemes on the initial list are from the Selby Area IDB and Scarborough BC coastal erosion works. This could sway the Investment Plan geographically, as these have high OM scores and the coastal schemes also have high costs - much of the any local flexible funding could be taken up by a few large schemes and many of the smaller inland schemes could then struggle to attract sub-regional funding such as Local Levy. This was a consideration when developing the Investment Plan.

Established routes to Partnership Funding:

IDB schemes have good OM scores because partnership funding has already been secured. The remaining funding gaps are modest but the NYFRP will need be careful before choosing to invest in such locations in preference to urban settings that do not yet have established mechanisms to raise FCRM funds to support a FDGiA bid.

Table 1: Potential short term schemes list (3 years)

Scheme ID	Scheme Name	Households that benefit	Capital Cost	Secured Local Funding
NYCC1	Pickering - Pickering Beck Upland Storage Scheme	60	£2,100k	£1,250k
NYCC4	Thirsk FAS (Cod Beck)	27	£4,400k	£k
NYCC8	Skipton FAS (Eller, Ings and Waller Hill Becks)	356	£9,280k	£4,000k
NYCC9	Stokesley FAS	194	£2,000k	£200k
NYCC16	Milby Island and LangthorpeBoroughbridge PLP	35	£149k	£k
NYCC17	Hemingbrough - Goule Hall Pumping Station Refurb (River Ouse)	0	£25k	£14k
NYCC18	Hemingbrough - Hagthorpe Pumping Station Refurb (River Derwent)	0	£22k	£12k
NYCC20	Scarborough South Bay Visioning Study	0	£120k	£k
NYCC25	Robin Hoods Bay Appraisal and Seawall Works	42	£650k	£k
NYCC26	Robin Hoods Bay Appraisal and Drainage Works	18	£265k	£k
NYCC31	Whitby Harbour and West Cliff Coast Protection Works	681	£24,900k	£k
NYCC51	Runswick Bay Appraisal and Works	63	£2,500k	£k
NYCC52	Scarborough South Bay Foreshore Road to Spa Chalet	110	£9,800k	£k
NYCC53	Scarborough South Bay Spa Seawall Works	380	£10,000k	£k
NYCC54	Filey, York Sub Area PLP	204	£1,162k	£k
NYCC55	Snaith - Coates Marsh Pumping Station Refurb (River Aire)	2	£262k	£144k
NYCC56	Wistow - Wistow Clough Pumping Station (River Ouse)	0	£1,462k	£804k

Scheme ID	Scheme Name	Households that benefit	Capital Cost	Secured Local Funding
NYCC57	Airmyn - Little Airmyn Pumping Station (River Aire)	28	£1,144k	£629k
NYCC58	Sherburn in Elmet - Bond Ings Pumping Station	0	£258k	£142k
NYCC59	Temple Hirst Pumping Station	30	£1,581k	£870k
NYCC60	Barnby on the Marsh - Lendall Pumping Station	101	£618k	£k
	Totals	2331	£73million	£10million

3. Partnership Funding Assessment

The assessment process

The total FDGiA likely to be available in England over the short term is £480million. Clearly it is very likely that a large proportion of the funding of the schemes will need to come from alternative / local sources. Where could this come from? Is it realistic? The assessment process to inform this Investment Plan explored this.

The following figure captures the various aspects considered.



The following are key aspects of developing a Plan:

- What funding does NYFRP have available that can be directed to a scheme of their choice? This type of funding is very useful as it can be used to “top up” schemes to lever in funds such as FDGiA or can be used to fully fund strong local priorities. Local Levy is currently the best example of this. Decisions on how to use such funds are a key responsibility for the LLFA and local FCRM partnership.
- Could more flexible funding be found if communities and their political representatives were consulted and engaged? What impact would this have?
- Understand what FDGiA may be forthcoming for each scheme and in total. And how allocating more (or less) Partnership Funding affects the amount and probability of obtaining FDGiA.

- What impact would changes in the general economic / funding picture have?

Such issues have been considered and results of the assessment are presented below.

Local flexible Partnership Funding available

Table 2 – Identified Local Funding in the Short Term

Local flexible funding pot	Funding levels per annum £k			
	Current	High confidence	Best estimate	Optimistic estimate
Council Tax / core funding / internal re-allocation	200	150	200	200
RFCC support / schemes	240	50	240	300
Defra LLFA grant (residual available if any)	150	50	100	200

The main way to access further council or other government funds are to link into larger projects - e.g. where a reduction in flood risk would release development and/or create jobs.

Screening for other, scheme specific, Partnership Funding

The most likely other short to medium term Partnership Funding sources are more likely to be scheme specific:

- County Highways, for one off, highway related projects
- Section 106 for regeneration areas
- Private businesses for closely related areas
- Land owners for small amounts
- Raising small amounts through council tax at parish/town council level

The viability of such funding sources is summarised below, the full review can be found in Appendix B.

Community Infrastructure Levy (CIL) – There is a lack of certainty in accessing this funding source and this is considered a “scheme specific” source given the two tier administrative setting in North Yorkshire (Scarborough perhaps being a notable potential exception). However, the district authorities have not confirmed whether they will be applying CIL in their Local Development Framework (LDF). Planning policies need to be set now, in order for CIL to be raised for FCFRM. If CIL is used there is likely to be a geographic disparity across North Yorkshire, as some districts will raise it and some will not.

To give an indication of amounts that can be raised, York City Council (CC) has raised £20 million through CIL but this is very thinly spread across many departments and all of it has been

accounted for. Much of the amounts raised will go to large capital schemes. Due to the low confidence in CIL, this has not been used as a central funding source when assessing scheme funding in the short term.

Business Rate Supplements – The rural nature of North Yorkshire means businesses are spread out across this rural catchment. There are few areas where there is a concentration of businesses that could contribute to a significant funding pot (aside from Scarborough).

Council Tax Rises – In order to get public and council support, this only seems to be a realistic option for locations that have recently flooded. Opportunities for small amounts are more likely for town and parish councils.

Local Authority existing budgets – This is a more common source of funding for North Yorkshire CC. When there has been a high profile flood, pressure from within and outside the council can lead to funding being found from other internal sources. This source has formed part of the local flexible funding pot for NYCC.

County Highways – This is also a more established alternative funding source for NYCC where there is a clear link between road improvement schemes and flood risk (or where a highways asset is a key source of flood risk). This has been combined with 'local authority existing budgets' in the central funding pot. Of the order £50~100k pa is likely to be available from this source. An example from NYCC is the Sandsend coastal road that is at risk of being eroded. This is a minor road but would cut off a community, requiring a long and costly diversion. Current projections are that Highways will provide £4 million for the scheme with the remaining £4 million through GiA. This is a much higher amount than would normally be expected as it is predominantly a Highways scheme.

Section 106 – There seems to be more optimism about this source than CIL but it would be confined to larger towns where regeneration is proposed. LPAs will need to set policies now for S106 to be used for FRM.

Private businesses – There is evidence that this is a viable source of funding for FCRM. For example, a scheme in Skipton could benefit from support of several million pounds from Morrisons supermarket. However, the store will be a key beneficiary in this instance and there is little confidence in the NYFRP (or appetite to engage) that private businesses will be willing to fund schemes that primarily benefit the wider area.

Major landowners - In NYCC, land owners have provided funding towards catchment sensitive farming schemes e.g. Kirkby Moorside and the 'Slowing the Flow' scheme in Pickering. However, as it is difficult to quantify the reduction in risk that these schemes provide so there will be problems producing a transparent business case for FDGiA.

WFD - Experience from NYFRP is that there are challenges in WFD objectives with FRM benefits. NYCC will need to have further scheme specific discussions with Natural England and the EA if this source of funding is to be taken further.

European Union funding– NYCC will struggle to attract EU funding for FRM. NYCC applied for ERDF for funding of the Pickering scheme but were unsuccessful. Applications for EU FRM funding tend to be successful in Objective 2 areas e.g. Hull. These are rare in rural counties like North Yorkshire.

Yorkshire Water – As described previously, YW are part of the NYFRP. The intention is for YW to put forward potential schemes from their PR14 business cases on the joint MTP. Currently there are few opportunities for YW to fund schemes that are not directly related to their assets. In the future OFWAT may relax outcome measures allowing YW fund a wider range of schemes that benefit.

IDB – In 2010 the Selby Area IDB has a total income of £1.2 million, the majority of which is raised by land owner rates and council tax (special levy). The EA and other beneficiaries (e.g. developers) also contribute small amounts. In 2010, Selby IDB invested £1.5 million on FRM. It would be difficult for the IDBs to raise more funds through the existing rate payers, but there may be opportunities to raise more funds through other beneficiaries such as developers.

Funding scenarios and findings

Four funding scenarios were examined for the short term Investment Plan, these are:

1. **Further austerity**, with an even poorer local and national outlook.
2. **As present**, including current OM targets needed to obtain FDGiA.
3. As present in terms of FDGiA, but with **enhanced local contribution**.
4. **Economic recovery**, with easier local and national funding pictures – sufficient to provide a fully funded short term programme.

A key consideration for funding is the current scheme Partnership Funding (PF) score threshold for obtaining provisional FDGiA approval and entry on to the Environment Agency’s “Medium Term Plan” or “Sanctioned List” of projects. Firm information for this year’s applications is not available, but indications are that it will be in the region of 180-200%. When this Plan was being developed the indications were that the figure would be 130%. This should be kept in mind when reviewing the results. It means that output based on all but Scenario 1 is likely to be too optimistic in terms of the amount of GiA available. This Plan may need to be updated in the near future if the view is taken that the threshold is likely to remain high in the short term.

Each scenario was allocated a local funding contribution value based on current, optimistic and pessimistic expectations. Different local flexible funding distribution choices were tested to see how the most GiA could be obtained and/or the highest number of schemes paid off. Distribution options include paying off schemes with the lowest funding shortfall first (likely to pay the most schemes off). If the local economic and GiA picture becomes more challenging then the local funding is best served by optimising its efforts towards schemes with strong Partnership Funding scores and rethink or defer other schemes until the outlook is improved.

Table 3 below summarises the results for each scenario.

Table 3 – Investment Plan Scenarios

Scenario	Required PF Score	Fundable programme	Households benefitting	Final GiA £million	Local contribution £million
1 - Further austerity	180%	5 schemes £9.6million total cost	119	0.8	8.8

2 – As present	130%	12 schemes £51million total cost	1537	40	11
3 - Enhanced local contribution (amounts increased to make a significant difference)	130%	13 schemes £60.4million total cost	1647	48	12.4
4 – Economic recovery – fully funded programme	100%	20 schemes £70million total cost	2304	59	11

Clearly the assumed Partnership Funding threshold is vital. A 180% figure, with limited local funding severely constrains what is achievable.

For the ‘further austerity’ scenario, paying off the schemes with the highest PF score makes the most of the partnership funding put in and benefits the most households. But this tends to pay off the IDB schemes, which have a high PF score due to previously secured partnership funding.

A similar pattern is seen in Scenario 2. Although paying off schemes with the highest OM score releases more GiA, more schemes can be paid off if schemes with the smallest shortfall are paid off first. But this does not always benefit the most households, as smaller shortfalls are likely to be smaller schemes, benefitting fewer houses.

However, from discussions with NYFRP, the consensus is that they would rather have many small schemes paid off than a few larger schemes. Compared to pay off schemes with the highest PF score, this would release less GiA for the amount put in, but would guarantee some schemes being funded. Part of the reasoning from NYFRP is that there is a risk that large schemes would qualify for GiA in principle, but miss out when in competition with other large schemes in England which have more Partnership Funding. Smaller schemes have a greater chance of being paid off with contributions from local levee improving PF scores.

When the initial Investment Plan scenarios were tested, it was found that the optimistic projections of funding made very little difference to the number of schemes funded and the amount of GiA raised. A certain Partnership Funding threshold had to be passed before significant benefits were realised. In order to get a significant increase in GiA, the local flexible funding pot needs to increase from £1.9m (present) to £3.8m (enhanced). **For this extra £2 million put in, £8 million more GiA is released** using distribution option c).

The enhanced local contribution funding values (scenario 3) do not reflect NYCC’s estimates on optimistic local funding contributions. The local contribution is based on the amount required to release significantly more GiA. This scenario should therefore be used to incentivise increased contributions from others.

With the lower PF threshold and the enhanced funding, all the schemes in Table 1 can be funded.

Figure 3 below shows the amounts of funding potentially available for NYCC for the present funding situation. This is based on 12 schemes being paid off and a total partnership funding pot of £11 million (included scheme tied funds already secured). The more partnership funding that can be raised leads to more GiA being released.

Figure 3 - Short term funding distribution – current funding situation (12-15 schemes funded)

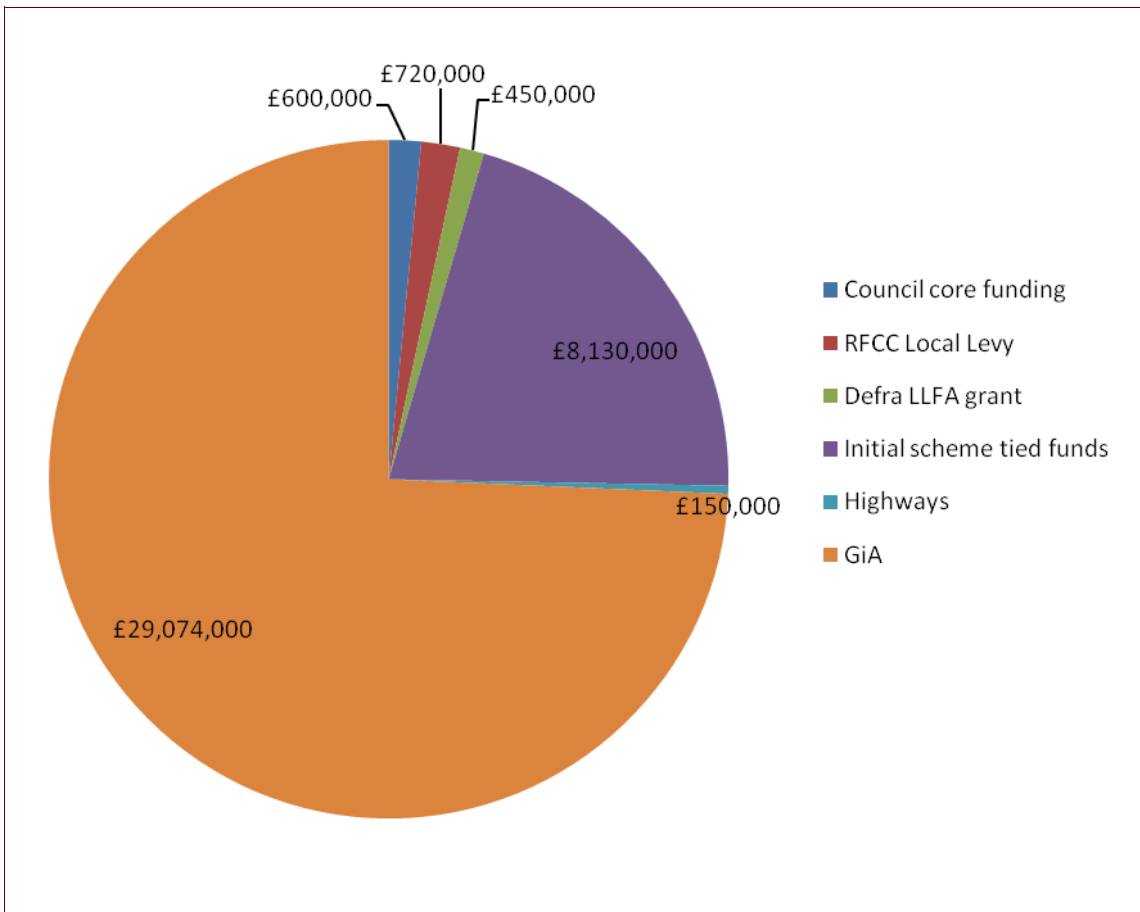
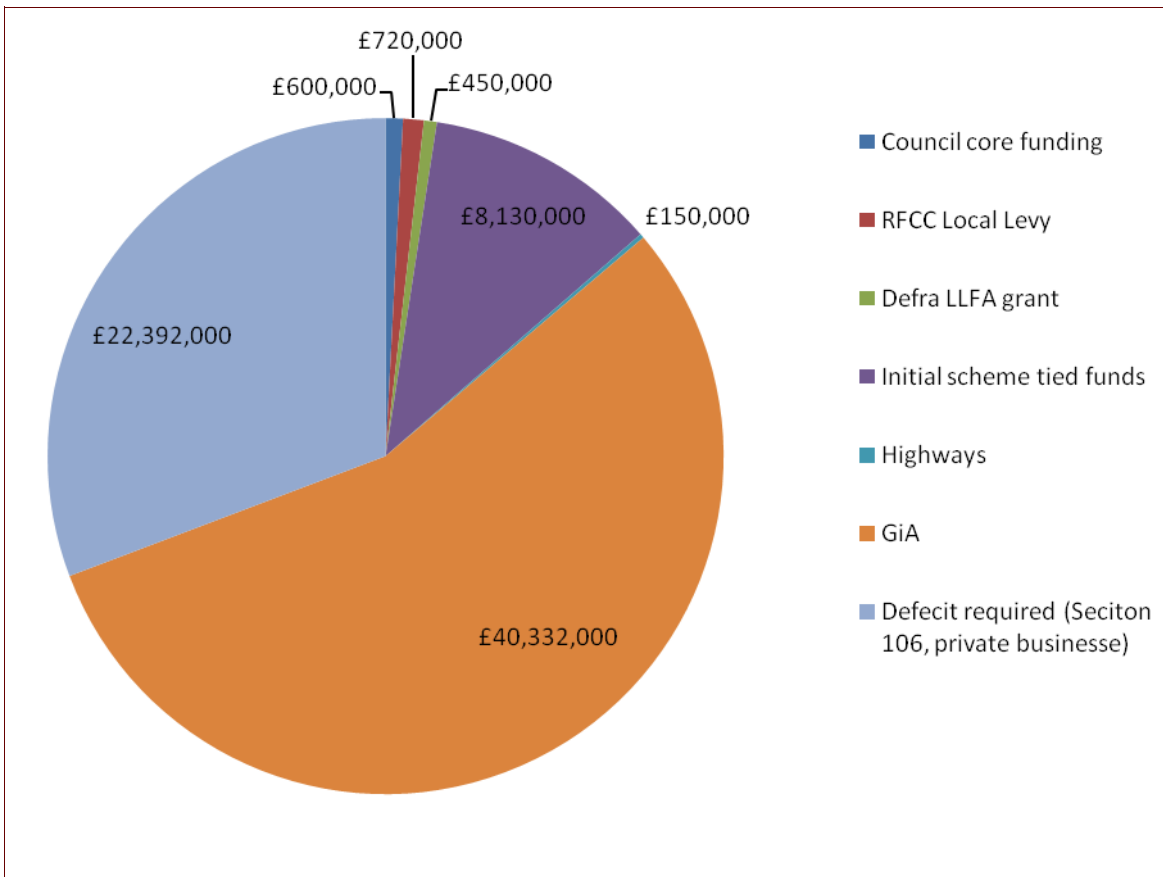


Figure 4 below shows the potential funding distribution if all 21 schemes were paid off for the present situation. To pay off all 21 schemes, there is currently a £22.4 million deficit. Following consultation with NYCC, the most likely source of this funding deficit is raising funds through developers (S106) and private businesses.

On balance, the full list of schemes (see Table 1) is currently unlikely to be viable, so a smaller list of schemes seems more likely in the short to medium term unless the district councils take a lead for schemes in their area.

Figure 4 - Short term funding distribution – potential enhanced funding situation (21 schemes funded)



With the new partnership funding arrangements, the majority of FCRM schemes will need partnership funding contributions or the LLFA will risk getting no GiA.

Looking at the scale of the issues in North Yorkshire, large contributions will be required and plans need to be made now to raise them. There is only a limited amount of funding that NYCC and RFCC can allocate to the flexible funding pot (Local Levy, Highways budgets etc). The most effective way of raising funds will be for the district councils to take a lead in this area. The district councils should be informed which schemes are in their area and the funding shortfall and they, with appropriate consultation, will need to decide whether the schemes are viable. Based on this, Table 4 below shows the total funding deficit for each district for the short term.

Table 4 - Required contribution from districts for a fully funded programme

District Council	Flexible Funding Distribution (a)	Flexible Funding Distribution (c)
Ryedale	0	£970k
Hambleton	£6,200k	£4,400k
Craven	£5,220k	£5,200k
Harrogate	0	£150k
Selby	0	£780k
Scarborough	£20,800k	£10,900k
Totals	£32million	£22.4million

Two different funding distribution choices are presented; a) shows the funding gap after the schemes with the smallest shortfall are paid off first. This tends to benefit the district councils with the smaller schemes (i.e. the small market towns with main river flooding problems) but leaves a large funding gap for Scarborough which has large coastal erosion schemes. However, paying off schemes with the highest cost benefit score first (c), releases more funds and distributes the funding gap more evenly across the districts. Scarborough Council would still have a large amount to raise, as would the smaller districts such as Craven and Hambleton.

The districts councils should develop strategies to bring in funds, which is likely to be linked to development and regeneration. Districts should identify and work with large businesses and employers to deliver schemes. This should release large amounts for government funding for relatively small amounts put in and could offer many benefits such as release development land and delivering wider benefits to key employment areas.

The funding gap analysis is particularly important for Scarborough. Due to the scale of the coastal erosion schemes, large amounts of the “flexible funding” could be taken up by one or two of these schemes. The NYFRP think that the flexible funding should be reserved for smaller schemes where there are smaller shortfalls. Scarborough needs to develop a strategy for raising between £10 and £20 million for FCRM schemes.

CIL has been used in the past to raise this scale of funding for FCRM, an example is the Solent flood strategy, covering the coastline along Southampton, Portsmouth and Gosport where there are long standing development and flood risk issues. A partnership group was set up which included private developers the local authorities and the Environment Agency. Through the shared understanding of the required flood defence infrastructure, Portsmouth City Council were able to set up a CIL charge which should raise in the region of £40 million and pay for around 15 per cent of the flood defence costs.

4. The Short Term Investment Plan

Key assumptions

When looking at the best Investment Plan for NYCC, strategies for distributing “flexible funds” that involve either paying off the most schemes or release the most GiA are the only choices worth consideration. NYFRP preference is for many small schemes to be paid off rather than a few larger schemes. This would release less GiA for the amount put in, but would guarantee some schemes being funded across the entire County. As NYFRP would rather have the guarantee of some schemes being paid off, the Investment Plan has therefore been based on this strategy.

Three alternative investment plans have been presented given the present uncertainty about obtaining additional local funding – implementing the “full list” of schemes (see Table 1) and two “fall back” options where only the stronger schemes that also match NYFRP priorities are considered.

The required PF threshold is 130%, which may be too optimistic as stated previously. The lower 100% PF threshold has not been analysed further as it currently seems unlikely that the threshold will be this low in the next 3 to 5 years.

For this Investment Plan, the flexible funding pot is assumed to be £1.9 million.

Investment Plan 1 - “fall back” strategy

Based on the scenario testing presented in section 3, the stronger “fall back” list of schemes has been identified and presented in Table 5 below (rather than the full list presented Table 1). The schemes have been reviewed and relative “strength” of each (in terms of likelihood of securing funding) is to be assigned by NYCC at a later date. Following the investment plan, one of the tasks for NYCC will also assign key actions to take each scheme to the next stage of delivery.

Table 5 - Investment Plan 1 (“fall back” plan - variant a)

Scheme ID	Scheme Name	Project Cost	Scheme tied fund	Flexible local funding	FDGiA
NYCC1	Pickering - Pickering Beck Upland Storage Scheme	£2,100k	£1,250k	£850k	£k
NYCC16	Milby Island and Langthorpe Boroughbridge PLP	149		£78k	£71k
NYCC17	Hemingbrough - Goule Hall Pumping Station Refurb (River Ouse)	25	14	£k	£11k
NYCC18	Hemingbrough - Hagthorpe Pumping Station Refurb (River Derwent)	22	12	£k	£10k
NYCC20	Scarborough South Bay Visioning Study	120		£k	£120k

Scheme ID	Scheme Name	Project Cost	Scheme tied fund	Flexible local funding	FDGiA
NYCC25	Robin Hoods Bay Appraisal and Seawall Works	650		£k	£650k
NYCC26	Robin Hoods Bay Appraisal and Drainage Works	265		£k	£265k
NYCC31	Whitby Harbour and West Cliff Coast Protection Works	24,900		£k	£24,900k
NYCC51	Runswick Bay Appraisal and Works	2,500		£k	£2,500k
NYCC55	Snaith - Coates Marsh Pumping Station Refurb (River Aire)	262	144	£118k	£k
NYCC56	Wistow - Wistow Clough Pumping Station (River Ouse)	1,462	804	£381k	£278k
NYCC57	Airmyn - Little Airmyn Pumping Station (River Aire)	1,144	629	£75k	£440k
NYCC58	Sherburn in Elmet - Bond Ings Pumping Station	258	142	£117k	£k
NYCC59	Temple Hirst Pumping Station	1,581	870	£176k	£535k
NYCC60	Barnby on the Marsh - Lendall Pumping Station	618		£k	£618k
	Totals	36,056	3,865	1,795	30,398

Investment Plan 1 pays off 15 of the 21 schemes and releases £30.4 million GiA for the £1.8million of flexible funding and £3.9 million of scheme tied funding invested. This includes all of the Selby Area IDB schemes but does not pay off some locally and regionally important (but low scoring and high cost/deficit) towns such as Thirsk, Stokesley, Skipton and Scarborough. The schemes that are not included in Investment Plan 1 are:

- NYCC4 Thirsk FAS (Cod Beck)
- NYCC8 Skipton FAS (Eller, Ings and Waller Hill Becks)
- NYCC9 Stokesley FAS
- NYCC52 Scarborough South Bay Foreshore Road to Spa Chalet
- NYCC53 Scarborough South Bay Spa Seawall Works
- NYCC54 Filey, York Sub Area PLP

If Investment Plan 1 is adopted, Skipton and Stokesley both have scheme tied funds available which would be lost to FRM (£4million for Skipton). Three of the schemes not fully funded are coastal erosion schemes in Scarborough BC, two of which have shortfalls in the region of £10 million.

Other Investment Plans based on enhanced funding have also been investigated and are discussed below.

Other viable investment plans

There is an opportunity to obtain more GiA and fund more schemes if additional contributions can be found. Two alternative investment plans have therefore been presented

Investment Plan 2 – Fully funded programme where all schemes are funded (Table 1 list).

Investment Plan 3 – Targeted enhanced local investment, where contributions only go to specific schemes to maximise GiA.

Table 6 below shows the key facts for all three possible investment plans.

Table 6 - Key facts for the investment plan options

Investment Plan	Schemes Paid off	Scheme tied/district raised fund	Flexible funding	Realised FDGiA	Comments
1-Fall back plan	15	£3.9 million	£1.8 million	£30.4 million	Prioritising schemes with smaller funding shortfalls.
2-Fully funded plan	21	£35.4 million	£3.8 million	£33.6 million	Includes all schemes.
3-Targeted enhanced plan	17	£2.4 million	£3.8 million	£48.2 million	Does not include the schemes with large funding gaps and weaker justification.

It has already been discussed that raising an additional £2 million of flexible funding could release up to £8 million more GiA. NYCC are investigating ways of increasing this flexible funding pot and this could be viable.

In order to pay off all the schemes, this additional flexible funding would need to be supplemented by a further £32 million of scheme tied or district council raised funding. Table 7 below shows how much the district councils would need to raise for all schemes to be funded.

Table 7 - Extra district funding required for a fully funded plan (Plan 2)

Scheme ID	Scheme Name	District Council	Total additional funds to be raised
NYCC4	Thirsk FAS (Cod Beck)	Hambleton	£4.4 million
NYCC8	Skipton FAS (Eller, Ings and Waller Hill Becks)	Craven	£6 million
NYCC31	Whitby Harbour and West Cliff Coast Protection Works	Scarborough	£21 million
NYCC51	Runswick Bay Appraisal and Works		
NYCC52	Scarborough South Bay Foreshore Road to Spa Chalet		
NYCC53	Scarborough South Bay Spa Seawall Works		

The amounts that need to be raised are significant and only £3.2 million of additional GiA is raised for the efforts (see Table 6). However, Investment Plan 3 shows that more GiA can be raised if only selected schemes, with high PF scores, are promoted - allowing the use of the flexible funding to be optimised to best effect. This approach would only pay off two additional schemes, but would release £17.6 million more GiA and could only require an additional £0.4 million from the district councils (see Table 6 and 8).

Table 8 - Extra district funding required for the targeted enhanced plan (Plan 3)

Scheme ID	Scheme Name	District Council	Total additional funds to be raised
NYCC16	Milby Island and Langthorpe Boroughbridge PLP	Harrogate	£0.15 million
NYCC55	Snaith - Coates Marsh Pumping Station Refurb (River Aire)	Selby	£0.12 million
NYCC58	Sherburn in Elmet - Bond Ings Pumping Station	Scarborough	£0.12 million

Investment Plan 3 does not include the lower scoring schemes that would take up a lot of the flexible funding if included (e.g. Pickering, Thirsk and Skipton). This is regarded as a “fair” approach to scheme funding and would allow time for these schemes to reduce costs or raise additional funds in order to increase the PF scores and the chance of obtaining GiA.

Investment Plan 2 shows a more equal distribution of the flexible funding than 3, as it is spread across many schemes but leaves the district councils to fill the large gaps. However, Plan 3 maximises the potential GiA available by paying off a few large deficit, but high scoring schemes with the flexible fund.

If additional funding can be found for the flexible fund and some of the district councils, Investment Plan 3 (targeted investment) would be the preferred plan.

The details and list of schemes for all three investment plans can be seen in Appendix E.

5. Action Plan

Funding

As discussed in sections 3 and 4, all schemes will require some local funding to supplement FDGiA and be delivered. When the funding requirements are broken down to district level, some of the councils have a large funding gap if a full list of schemes is to be funded. Even with a reduced scheme list, additional funding needs to be secured.

Consultation with the districts, elected members and local communities based on this Investment Plan is essential. The appetite to raise the necessary funding needs to be tested for each area.

Scarborough Council has a number of high capital cost coastal erosion schemes that will need funding in the short to medium term. An action for Scarborough Council will be to develop a strategy to raise large amounts of money to fund coastal erosion schemes. This could include setting up a CIL. If funds are raised then this should also release large amounts of GiA.

Other district councils should consider the same, especially those that require schemes that will currently not be funded due to the current low OM scores and high deficits. Examples are:

- Thirsk FAS (Cod Beck) Hambleton District Council
- Skipton FAS (Eller, Ings and Waller Hill Becks) Craven District Council

Feasibility studies

New feasibility studies will be required for schemes in the short term and eventually schemes on the medium and long-term lists. Some schemes with existing studies may require further work so that lower cost options can be explored, further benefits found or additional funding support gained.

The NYFRP raised concerns about how future feasibility studies and investigations will be funded. The partnership currently has a number of scheme proposals that were developed under the previous mechanism. The partnership is now exploring ways in which more detailed studies could be supported by the Local Levy. However, this source of funding has a large number of competing demands upon it.

MTP allocation process

In 2012, relevant authorities were required to submit potential schemes to the EA by 15 June, and it is likely that a similar deadline will emerge next year. Appendix C shows the process steps identified by the NYFRP partnership.

Scheme level action - 'Case Studies'

The following scheme level case studies for early evaluation have been identified:

Sandsend - a significant sum of partnership funding from the highway authority (£4.6m of the £9.4m) is potentially available. The sea defences protect a major highway, and the scheme was identified in North Yorkshire's Local Transport Plan which was approved by the Full Council in 2010. Permission was then sought from the Council's Executive in 2012 to apply for the FDGiA

grant, with further permissions required to accept the grant should the bid be successful. The EA have requested confirmation that the NYCC will commit the funding, which though not a legally binding commitment, does expose the authority to a degree of reputational risk should the partnership funding be withdrawn at a later date.

Skipton – this scheme requires a substantial amount of partnership funding in order for it to progress (approximately £4m of the total £9.5m). Potential contributions have been identified from developers and from businesses that will benefit from the works, but a great deal of negotiation remains to be carried out before the necessary agreements can be entered into. One significant hurdle in this process is the difficulty posed by the fact the GiA PF score required is uncertain. Negotiating with potential contributors on this basis is challenging, and represents a barrier to leveraging in contributions.

Management and updating the Investment Plan

Through the NYFRP, the County Council has an organisational framework to initiate and progress the establishment of local partnership arrangements to support local flood risk management. The framework is intended to ensure that partnerships are managed in ways which enhance the co-ordination of policy and actions; and provide strong accountability and transparency i.e. a clear demonstration of cooperation and the 'added value' of partnership working.

Through the NYFRP, the LLFA can fulfil its statutory roles and to determine the work programme, projects and issues to be considered. One of the key actions for the group will be to identify new funding opportunities, more cost effective methods of joint working and ensure that the core skills, competencies and resources are safeguarded. The NYFRP should lead on the identification of different schemes and will support a coordinated bidding process with all partners.

There are a number of events which would act as triggers for change in the Investment Plan and associated actions. These include: changes to funding regimes, availability of funding, changes in political priorities, community pressure, new development, regeneration, revised assessments of flood risk, and changes in assessment methodology.

NYFRP are developing a joint FCRM works programme and flood prioritisation method to submit to the RFCC for funding applications. Appendix C shows the funding allocation process.

6. Verification

This version of the Investment Plan is considered to be a 'consultation draft'. Its aim is to present the range of ambition and the most likely outcome of flood risk management investment. This Investment Plan has been developed in close collaboration with the Environment Agency. All other FRM partners have fed into this Investment Plan through their involvement with the NYFRP.

Consultation will be required with a range of other partners, including district finance teams, local politicians and communities and many others to obtain their views on the right scale of ambition for responses to flood risk in the short to medium term. This consultation process would enable ideas to be brought forward for generating more funding to deliver a more robust programme. This process would then inform later revisions of the Investment Plan and the Local FRM Strategy, in particular future actions required.

This section of the Investment Plan will be updated once a formal process for its approval is agreed with all parties, including the County Council, districts / boroughs, RFCC and other partners.

Appendices

Appendix A: Medium and long term scheme lists

Medium term schemes list

Scheme ID	Scheme Name	Project Cost	Current Raw OM Score
NYCC2	Brompton - Brompton Beck/North Beck FAS	2,500.00	17%
NYCC3	Glusburn FAS (Glusburn Beck)	3,250.00	10%
NYCC5	Brompton - Brompton Beck/North Beck FAS	10,000.00	3%
NYCC6	Glusburn FAS (Glusburn Beck)	7,500.00	29%
NYCC7	Thirsk FAS (Cod Beck)	10,000.00	2%
NYCC28	Newby	18,300.00	69%
NYCC29	Tadcaster maintenace- small schemes	6,410.00	66%
NYCC30	Bolton Percy PLP	18,200.00	25%
NYCC35	Hemingbrough - Goule Hall Pumping Station Refurb (River Ouse)	7,900.00	46%
NYCC36	Hemingbrough - Hagthorpe Pumping Station Refurb (River Derwent)	23,900.00	74%
NYCC37	Preliminary Studies for SMP3	26,232.00	68%
NYCC38	Scarborough South Bay Visioning Study	21,000.00	67%
NYCC39	Scottish Border to Flamborough Head SMP3	8,400.00	7%
NYCC40	North East Regional Coastal Monitoring Programme (YRFCC)	5,110.00	29%
NYCC41	Cayton, Scarborough - Cayton Bay Coastal Strategy	15,000.00	8%
NYCC42	Filey Coastal Monitoring Programme	42,900.00	40%

Scheme Name	Location	Priority	Comment and source of data
Catterick Village	Easting-424074 Northing-497885	Medium term	Local levy funding scheme, some indicative costs and damages available.
Harrogate Battleboxes - Phase 2	Easting-430426 Northing-455316	Medium term	Local levy funding scheme, some indicative costs and damages available.
Burniston – Scarborough	Easting-501272 Northing-493053	Medium term	Local levy funding scheme, some indicative costs and damages available.
Northallerton – Romanby Property Resilience	Easting-436920 Northing-493834	Medium term	Local levy funding scheme, some indicative costs and damages available.
Kirkby moorside	Eastings-462001 Northings-437661	Medium term	Confirmed as a flood risk location following LLFA/CC highways discussions and review of PFRA data. Currently no GiA calculator information available. LLFA to provide this information at a later date.
Malton - scheme already in place?	Easting-478558 Northing-471836	Long term	Confirmed as a flood risk location following LLFA/CC highways discussions and review of JBA's risk maps. Currently no GiA calculator information available. LLFA to provide this information at a later date.
Great Ayton. Surface water and main river	Easting-456147 Northing-510857	Long term	Confirmed as a flood risk location following LLFA/CC highways discussions. JBA Risk Map, currently no GiA calculator information available. LLFA to provide. Some resilience works currently being completed.
Selby - main river and surface water	Easting-401239 Northing-432374	Long term	Confirmed as a flood risk location following LLFA/CC highways discussions and review of JBA's risk maps. Currently no GiA calculator information available. LLFA to provide this information at a later date.
Muston - main river surface water	Easting-482771 Northing-338109	Long term	Confirmed as a flood risk location following LLFA/CC highways discussions and review of JBA's risk maps. Currently no GiA calculator information available. LLFA to provide this information at a later date.
Pateley Bridge. Main river	Easting-415758 Northing-465658	Long term	Confirmed as a flood risk location following LLFA/CC highways discussions and review of PFRA data. Currently no GiA calculator information available. LLFA to provide this information at a later date.

Hawes - main river and surface water	Easting-387492 Northing-489544	Long term	Confirmed as a flood risk location following LLFA/CC highways discussions and review of PFRA data. Currently no GiA calculator information available. LLFA to provide this information at a later date.
Richmond - surface water	Easting-416972 Northing-501029	Long term	Confirmed as a flood risk location following LLFA/CC highways discussions and review of PFRA data. Currently no GiA calculator information available. LLFA to provide this information at a later date.
Colburn. Surface water	Easting-420311 Northing-498218	Long term	Confirmed as a flood risk location following LLFA/CC highways discussions and review of JBA's risk maps. Currently no GiA calculator information available. LLFA to provide this information at a later date.
Brotherton / Byram. Main river and surface water	Easting-448059 Northing-426103	Long term	Confirmed as a flood risk location following LLFA/CC highways discussions and review of JBA's risk maps. Currently no GiA calculator information available. LLFA to provide this information at a later date.
Flixton and Folkton. Surface water.	Easting-503889 Northing-479647	Long term	Confirmed as a flood risk location following LLFA/CC highways discussions and review of JBA's risk maps. Currently no GiA calculator information available. LLFA to provide this information at a later date.
Hellifield. Main river	Easting-385513 Northing-456537	Long term	Confirmed as a flood risk location following LLFA/CC highways discussions and review of PFRA data. Currently no GiA calculator information available. LLFA to provide this information at a later date.
Settle	Easting-381865 Northing-463818	Long term	Confirmed as a flood risk location following LLFA/CC highways discussions and review of PFRA data. Currently no GiA calculator information available. LLFA to provide this information at a later date.
Riccall - main river	Eastings-462002 Northings-437672	Long term	Confirmed as a flood risk location following LLFA/CC highways discussions and review of PFRA data. Currently no GiA calculator information available. LLFA to provide this information at a later date.

Appendix B: Funding Review

Local “flexible” funding pot - Funds that are accessible to the local Partnership for FCRM and which can be directed towards schemes of their choice are key to achieving local priorities and maximising the total funding pot available (e.g. through leveraging FDGiA). Local Levy is the best example of this. Decisions on how to use such funds are a key responsibility for the LLFA and local FCRM partnership.

Local Levy RFCC - £1.75 millions is available for the whole of Yorkshire this year. For individual schemes, only small amounts are likely to be approved. This is predominantly due to the partisan nature of some of the members, not willing to let large amounts of the levy go to a single scheme outside of their county, even if it is very worthwhile. If evenly distributed, the local levy would amount to approximately £400k per county. Assuming 5 districts, this would come to £80k per district council.

Community Infrastructure Levy (CIL) – There was a lot of scepticism about this funding source following conversations with the project team and York CC’s Assistant Director of Strategic Planning and Transport. York CC has raised £20 million through the CIL but this is very thinly spread and all of this has been accounted for. Every council department is pulling on this funding source and from York CC’s point of view; none of this will be available for FRM. The project team also thought there was a very low prospect of securing any CIL funding for NYCC.

Business Rate Supplements – For NYCC, businesses are spread out across this rural catchment. There are few areas where there is a concentration of businesses that could contribute to a significant funding pot (apart from Scarborough perhaps).

Also, it was thought that there would be resistance from business to contribute to funding through these means due to the low levels of return for business through the FDGiA OM scoring system.

Council Tax – In order to get public and council support, this only seems to be a realistic option for locations that have recently flooded. Opportunities more likely for town and parish councils but amounts raised tend to be quite small.

Local Authority existing budgets – When there has been a high profile flood, pressure from within and outside the council can lead to funding being found from other internal sources. The project team thought that this is currently one of the most common sources of FRM funding for them.

County Highways – This is also a better known alternative funding source for NYCC. There needs to be a clear link between road improvement schemes and the flood risk. There are also options where the Highways asset is a key source of flood risk (e.g. a road culvert).

NYCC are currently applying for GiA for a coastal road that is eroding. This is a minor road but would cut off a community, requiring a long diversion. Highways would provide £4 million with FDGiA providing the remaining £4 million.

Section 106 – There seems to be more optimism about this source than CIL. This could be a good option for regeneration areas.

Private Businesses – There is evidence of this funding source for FRM in NYCC. There is a scheme in Skipton that could get several million from Morrisons. However, the Skipton store has been built over the flood risk culvert, so it is a key source of risk and a beneficiary. There is little evidence of businesses helping to fund schemes when they are not directly affected or part of the problem.

Landowners - In NYCC, land owners have provided funding towards catchment sensitive farming schemes e.g. Kirkby Moorside and the 'Slowing the Flow' scheme in Pickering. However, as it is difficult to quantify the reduction in risk for these schemes so it will be difficult to produce a business case for FDGiA. E.g. GiA was not available for the Westfield Beck flood lagoons in York (not sure about this example as the reduced risk could have been modelled and a robust PAR produced - the cost of the scheme was £150k, so it may not have been cost effective to produce a PAR with modelling).

European Union funding – WFD experience from the project team is that it is almost impossible to link the requirement of the WFD with flood risk management benefits. They seem to contradict each other in the examples they have looked into.

NYCC applied for ERDF for funding of the Pickering scheme but were unsuccessful. Applications for EU FRM funding tend to be successful in Objective 2 areas e.g. Hull. These are rare in rural Counties.

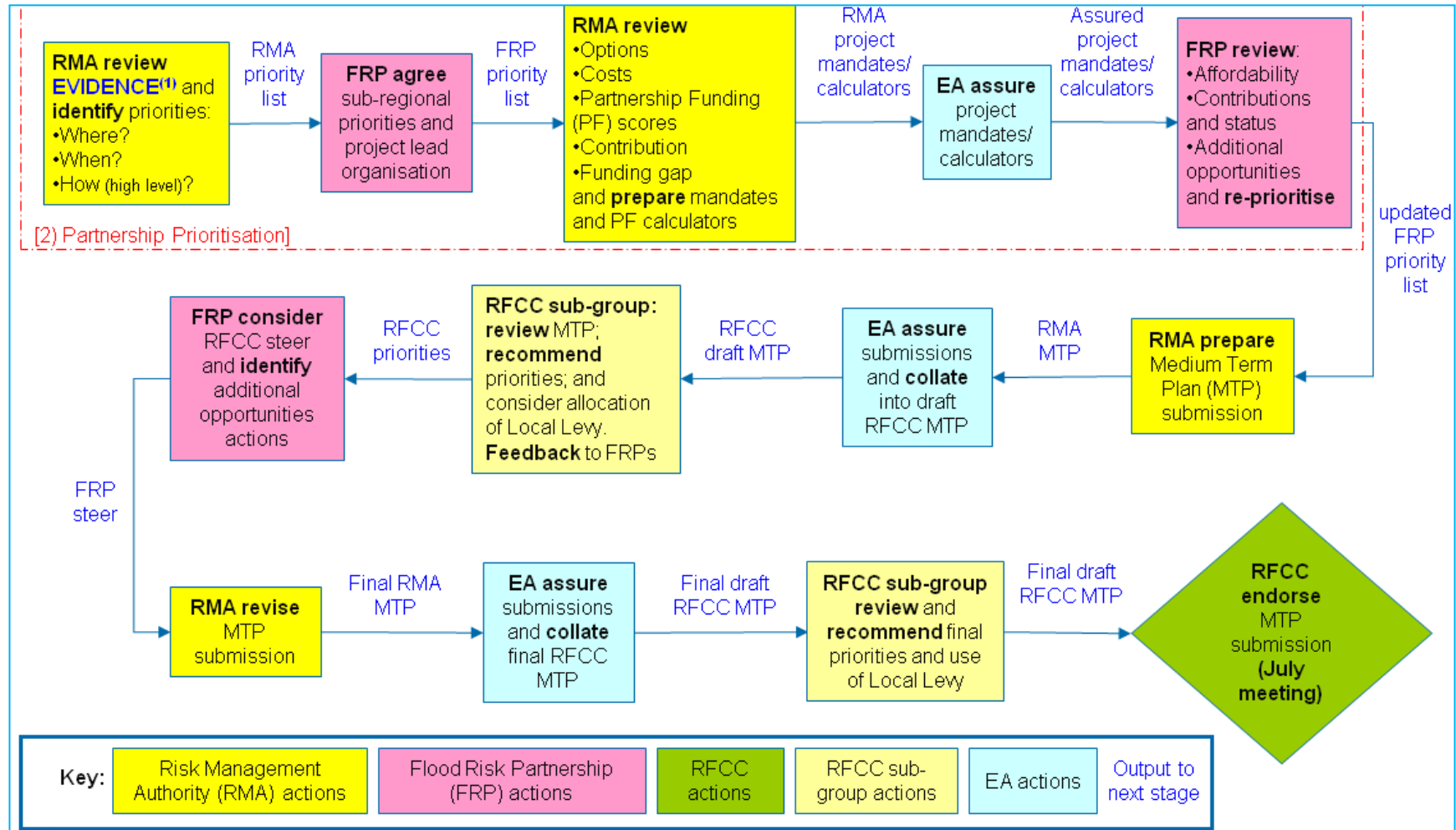
Yorkshire Water – Well known problem with OFWAT requirements reducing the flexibility in how water companies can reduce flood risk from their sewer systems. The outputs that OFWAT require are very restrictive so there tends to be limited opportunities for Yorkshire Water to part fund FRM schemes, unless their assets are directly involved.

IDB – limited opportunities to raise extra funding through rate increases.

Most Likely Opportunities

- Local Levy - £400k/year
- Existing budgets from Local and County Council for one off projects –
- County Highways, for one off, highway related projects - £4 million over 5-10 years?
- Section 106 for regeneration areas –
- Private Businesses for closely related areas - £2 million over 5-10 years
- Land owners – small amounts
- Raising council tax at parish/town council level – small amount

Appendix C: Partnerships and RFCC involvement in 13/14 Allocation Process (March – July 2012)



Appendix D: Full Scenario Review and Selected Outputs

For each of the scenarios, four different funding distribution choices were tested to see which would pay off the most schemes and gain the most GiA. The distribution choices are:

- a - Small funding gap first
- b - LLFA priority, then a)
- c - By highest OM score
- d - Fewer funding streams first

Scenario 1-Harder Times (poor local outlook and stiff competition for FDGiA)

With this outlook, very few schemes are paid off across all distribution choices. Option a) pays off the most schemes, but the least GiA is released. Options b) and c) both pay off 5 schemes but option c) draws more GiA and benefits almost twice as many households.

For the 'harder times' scenario, paying off the schemes with the highest OM score makes the most of the partnership funding put in and benefits the most households. Distribution choice c) is therefore the standout option.

However, the geographic spread of schemes paid off should be considered before proceeding with this option. This is in reference to the Selby IDB schemes that have high adjusted OM scores due to scheme tied funding. It may be worth paying off these schemes in the short term, even if they are in a geographic cluster, to make the most of the GiA available. This would need to be effectively communicated through the NYFRP and highlighted that other schemes would be paid off when the GiA threshold decreases and/or partnership funding increases.

Distribution Choices	Final FDGiA	Schemes Funded	Total cash cost £k	Final shortfall	Households benefitting
a - Small gap first	£0.3m	7	£73m	£64m	55
b - LLFA priority, then a)	£0.7m	5	£73m	£63m	60
c - By highest OM score	£0.8m	5	£73m	£63m	119
d - Fewer funding streams first	£0.1m	3	£73m	£68m	0

Scenario 2 – As present

With the present situation, between 8 and 15 schemes out of 21 are paid off. Allocating funds to largest OM score (distribution choice c) releases £10m more GiA than the others. Three less schemes are paid off compared to option a), however, option c) benefits 500 more properties than a) which again makes it the stand out distribution choice.

An interesting example in this scenario is Pickering. Pickering (NYCC1) has a scheme tied partnership fund of £1.2million. This moves the raw OM score from 16% to an adjusted 76% but still does not reach the required GiA threshold (in this case 130%). As the raw OM score is so low, the scheme will not attract any GiA, no matter how much partnership funding is put in. Pickering needs raw OM of around 50% to attract any GiA indicating that scheme costs should be reduced or new benefits found.

If the Pickering project can be reviewed to obtain a raw OM score of nearer 50%, or the threshold for GiA reduces to nearer 100%, then this will release £335k GiA for the £515k invested from local sources.

If a scheme is required in Pickering now and costs cannot be reduced, an alternative option would be for NYFRP to provide the whole of the £850k shortfall and lead the project without government assistance. The most sensible option may be to delay the Pickering scheme until the economic situation has improved, saving the local flexible funding pot for other better scoring schemes.

Distribution Choices	Final FDGiA	Schemes Funded	Total cash cost	Final shortfall	Households benefitting
a - Small gap first	£30m	15	£73m	£32m	1,060
b - LLFA priority, then a)	£31m	11	£73m	£32m	1,159
c - By highest OM score	£40m	12	£73m	£22m	1,573
d - Fewer funding streams first	£29m	8	£73m	£34m	905

Scenario 3 - Enhanced local contribution (amounts increased to make a significant difference)

When the initial Investment Plan scenarios were tested, it was found that the optimistic projections of funding made very little difference to the number of schemes funded and the amount of GiA raised. A certain partnership funding threshold had to be passed before significant benefits were realised. The above funding values are just over the required threshold to get significant benefits. However, these figures do not relate to NYCC's estimates. This scenario can therefore be used to incentivise increased contributions from others.

In order to get a significant increase in GiA, the local flexible funding pot needs to increase from £1.9m (present) to £3.8m (enhanced). **For this extra £2 million put in, £8 million more GiA is released using distribution option c).**

The other three distribution options do very little for the amount put in. Option a) pays off 6 more schemes than option c) and benefits almost as many houses. Option c) is paying off fewer schemes and many are IDB schemes as they have the highest OM scores (due to required scheme tied funds already raised by the IDB). This may not be acceptable to the NYFRP and option a) may be considered a "fairer" option (even though £10 million less GiA

is released) as more schemes are paid off over a wider geographic area. This is an important investment decision for the Partnership and LLFA.

Another individual example of note is Skipton (NYCC8). This scheme has £4m of scheme tied funding from Morrisons but this still does not release GiA with a required GiA threshold of 130%. If the raw OM score is increased from 58% to 70% (through reducing scheme costs or increasing benefits) this will require £1.5m of flexible local investment in order to release £3.7 of GiA.

Alternatively, keeping the 58% OM score but increasing the Morrisons contribution from £4m to £6m will take £700k of flexible local investment to release £2.6 of GiA.

This highlights that in some cases it may be worth reassessing scheme costs, seeking additional funding or putting certain schemes on hold until the economic situation improves.

Distribution Choices	Final FDGiA	Schemes Funded	Total cash cost	Final shortfall	Households benefitting
a - Small gap first	£32m	17	£73m	£29m	1,458
b - LLFA priority, then a)	£31m	11	£73m	£29m	1,159
c - By highest OM score	£48m	13	£73m	£12.6m	1,647
d - Fewer funding streams first	£29m	8	£73m	£31.8	905

Scenario 4 – Sunny Outlook (Lower FDGiA threshold. Enhanced contribution)

With the lower threshold and the enhanced funding, all the schemes can be paid off if one low scoring scheme (NYCC4) is moved to the longer term plan. Options b) and d) draw £1 million less GiA than a) and c).

Distribution Choices	Final FDGiA	Schemes Funded	Total cash cost	Final shortfall	Households benefitting
a - Small gap first	£58m	20	£73m	£3m	2,304
b - LLFA priority, then a)	£58m	16	£73m	£4m	2,063
c - By highest OM score	£59m	20	£73m	3m	2,304
d - Fewer funding streams first	£58m	15	£73m	£4m	2,003

Appendix E - NYCC Investment Plans and Tool Screen Shots

Investment Plan 1 – Present Situation Fall Back Plan

Scheme ID	Scheme Name	Project Cost	Scheme tied fund	Central funding	Realised GiA
NYCC1	Pickering - Pickering Beck Upland Storage Scheme	2,100	1,250	£850k	£k
NYCC16	Milby Island and Langthorpe Boroughbridge PLP	149		£78k	£71k
NYCC17	Hemingbrough - Goule Hall Pumping Station Refurb (River Ouse)	25	14	£k	£11k
NYCC18	Hemingbrough - Hagthorpe Pumping Station Refurb (River Derwent)	22	12	£k	£10k
NYCC20	Scarborough South Bay Visioning Study	120		£k	£120k
NYCC25	Robin Hoods Bay Appraisal and Seawall Works	650		£k	£650k
NYCC26	Robin Hoods Bay Appraisal and Drainage Works	265		£k	£265k
NYCC31	Whitby Harbour and West Cliff Coast Protection Works	24,900		£k	£24,900k
NYCC51	Runswic Bay Appraisal and Works	2,500		£k	£2,500k
NYCC55	Snaith - Coates Marsh Pumping Station Refurb (River Aire)	262	144	£118k	£k
NYCC56	Wistow - Wistow Clough Pumping Station (River Ouse)	1,462	804	£381k	£278k
NYCC57	Airmyn - Little Airmyn Pumping Station (River Aire)	1,144	629	£75k	£440k
NYCC58	Sherburn in Elmet - Bond Ings Pumping Station	258	142	£117k	£k
NYCC59	Temple Hirst Pumping Station	1,581	870	£176k	£535k

NYCC60	Barnby on the Marsh - Lendall Pumping Station	618		£k	£618k
	Totals	36,056	3,865	1,795	30,398

FD2656: Strategic Funding Share Tool Version 3.9

User Entries:

1) What level of government funding is available? Medium (require OM 130%) 130%

2) Council funding (including highways) User Defined (Enter £k value > 0 in cell D3) £750k

3) Defra LLFA Grant User Defined (Enter £k value > 0 in cell D4) £450k

4) Choose strength of RFCC Local Levy User Defined (Enter £k value > 0 in cell D5) £720k

5) How shall we weight the centralised funding? **Total local flexible funding = £1,920k**

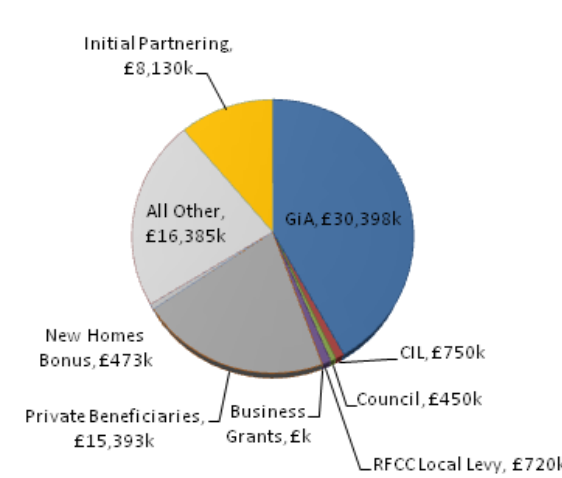
Pay off schemes in order of smallest to largest shortfall, optimize GiA

Lead Local Flood Authority: **North Yorkshire County Council**

Date stamp for investigation: 21/08/2012 15:29 **Checks** QA status

Overall Funding Picture - Short Term

Note: Grey segment is funding yet to be found - the "shortfall"



Funding Source

- GiA
- CIL
- Council
- RFCC Local Levy
- Business Grants
- Private Beneficiaries
- New Homes Bonus
- All Other
- Initial Partnering

Total Cash Cost Current Phase

£72,698k

Initial Total LLFA Shortfall **£35,494k**

Shortfall, with Local Levy, GiA, CIL, RFCC & Council **£32,252k**

Total number of households benefitting

1060

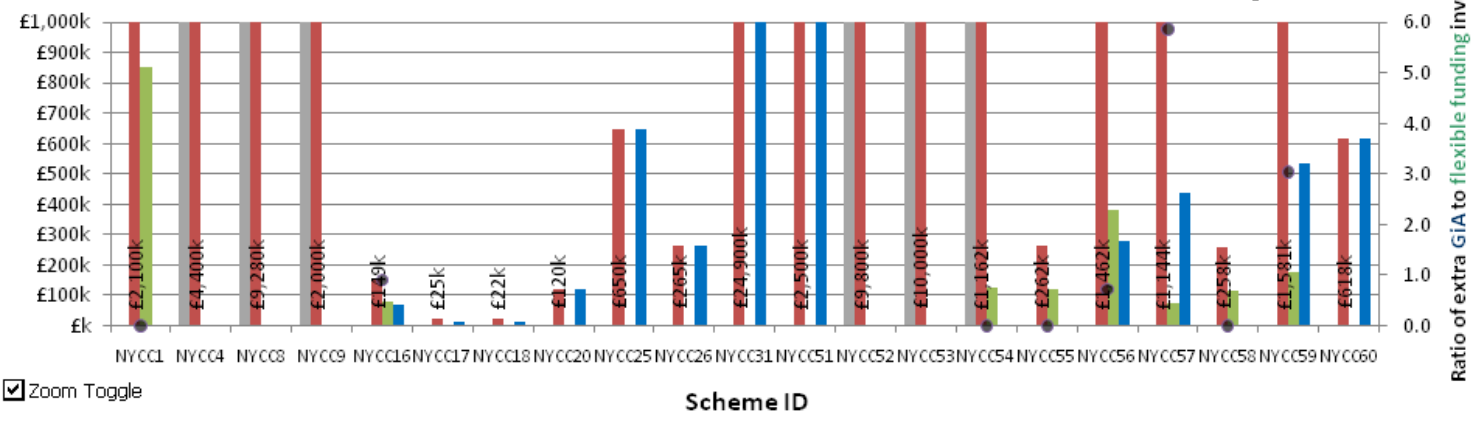
Initial and final FDGiA

Initial **£29,074k**

Final **£30,398k**

Scheme by Scheme Funding Picture - Short Term

Schemes that would now **12** Paid for **15** Total potential no. of schemes **21**

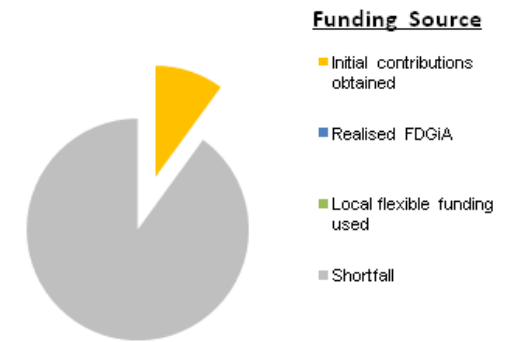


Choose Scheme **NYCC9**

Final OM Score **116**

Benefiting households: 194

Deprivation: Moderate



Funding Split for Individual Scheme

Investment Plan 2 – Targeted Investment

Scheme ID	Scheme Name	Project strength	Project Cost	Scheme tied fund	Central funding	Realised GiA
NYCC9	Stokesley FAS		2000	200	£283k	£1,517k
NYCC16	Milby Island and Langthorpe Boroughbridge PLP		148.75	149	£k	£k
NYCC17	Hemingbrough - Goule Hall Pumping Station Refurb (River Ouse)		25	14	£k	£11k
NYCC18	Hemingbrough - Hagthorpe Pumping Station Refurb (River Derwent)		22	12	£k	£10k
NYCC20	Scarborough South Bay Visioning Study		120	0	£k	£120k
NYCC25	Robin Hoods Bay Appraisal and Seawall Works		650	0	£k	£650k
NYCC26	Robin Hoods Bay Appraisal and Drainage Works		265	0	£k	£265k
NYCC31	Whitby Harbour and West Cliff Coast Protection Works		24900	0	£k	£24,900k
NYCC51	Runswick Bay Appraisal and Works		2500	0	£k	£2,500k
NYCC52	Scarborough South Bay Foreshore Road to Spa Chalet		9800	0	£1,866k	£7,934k
NYCC53	Scarborough South Bay Spa Seawall Works		10000	0	£1,310k	£8,690k
NYCC55	Snaith - Coates Marsh Pumping Station Refurb (River Aire)		262	262	£k	£k
NYCC57	Airmyn - Little Airmyn Pumping Station (River Aire)		1144	629	£75k	£440k
NYCC58	Sherburn in Elmet - Bond Ings Pumping Station		258	258	£k	£k

NYCC59	Temple Hirst Pumping Station		1581	870	£176k	£535k
NYCC60	Barnby on the Marsh - Lendall Pumping Station		618	0	£k	£618k
	Totals		54,294	2,394	3,710	48,190

FD2656: Strategic Funding Share Tool Version 3.9

User Entries:

1) What level of government funding is available? 130%

2) Council funding (including highways) £1,800k

3) Defra LLFA Grant £1,000k

4) Choose strength of RFCC Local Levy £1,000k

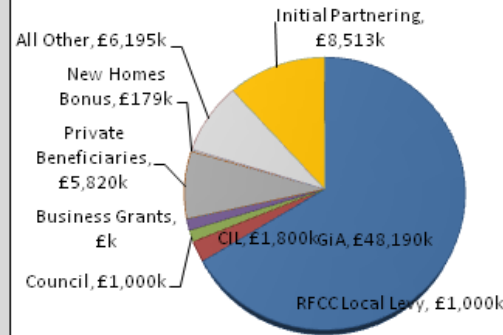
5) How shall we weight the centralised funding? **Total local flexible funding =** £3,800k

Lead Local Flood Authority: **North Yorkshire County Council**

Date stamp for investigation: 31/07/2012 11:30 **Checks** QA status

Overall Funding Picture - Short Term

Note: Grey segment is funding yet to be found - the "shortfall"



Funding Source

- GiA
- CIL
- Council
- RFCC Local Levy
- Business Grants
- Private Beneficiaries
- New Homes Bonus
- All Other
- Initial Partnering

Total Cash Cost Current Phase

£72,698k

Initial Total LLFA Shortfall **£35,111k**

Shortfall, with Local Levy, GiA, CIL, RFCC & Council **£12,195k**

Total number of households benefitting

1684

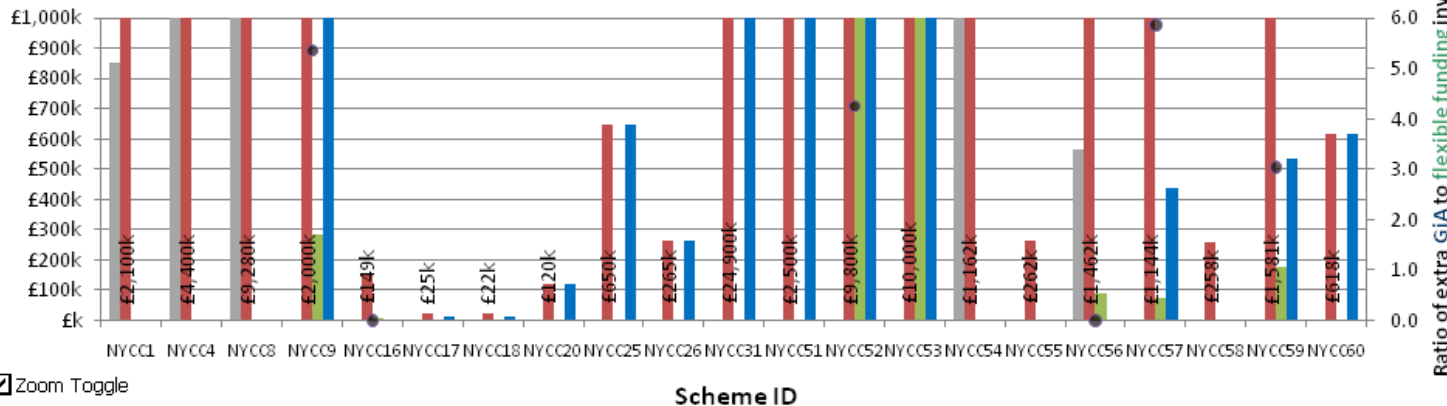
Initial and final FDGiA

Initial **£29,074k**

Final **£48,190k**

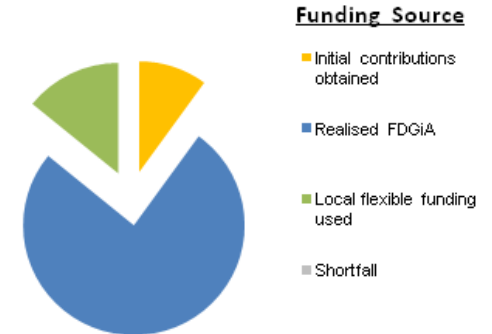
Scheme by Scheme Funding Picture - Short Term

Schemes that would now **14** Paid for **16** Total potential no. of schemes **21**



Choose Scheme Final OM Score **130**

Benefiting households: 194
Deprivation: Moderate



Funding Split for Individual Scheme

Investment Plan 3 – Fully Funded

Scheme ID	Scheme Name	Project strength	Project Cost	Scheme tied fund	Central funding	Realised GiA
NYCC1	Pickering - Pickering Beck Upland Storage Scheme		2100	1,250	£850k	£k
NYCC4	Thirs FAS (Cod Bec)		4400	4,400	£k	£k
NYCC8	Skipton FAS (Eller, Ings and Waller Hill Becks)		9280	6,000	£682k	£2,598k
NYCC9	Sto esley FAS		2000	200	£283k	£1,517k
NYCC16	Milby Island and Langthorpe Boroughbridge PLP		148.75	0	£78k	£71k
NYCC17	Hemingbrough - Goule Hall Pumping Station Refurb (River Ouse)		25	14	£k	£11k
NYCC18	Hemingbrough - Hagthorpe Pumping Station Refurb (River Derwent)		22	12	£k	£10k
NYCC20	Scarborough South Bay Visioning Study		120	0	£k	£120k
NYCC25	Robin Hoods Bay Appraisal and Seawall Wor s		650	0	£k	£650k
NYCC26	Robin Hoods Bay Appraisal and Drainage Wor s		265	0	£k	£265k
NYCC31	Whitby Harbour and West Cliff Coast Protection Wor s		24900	10,000	£k	£14,900k
NYCC51	Runswic Bay Appraisal and Wor s		2500	1,000	£k	£1,500k
NYCC52	Scarborough South Bay Foreshore Road to Spa Chalet		9800	5,000	£k	£4,800k
NYCC53	Scarborough South Bay Spa Seawall Wor s		10000	5,000	£k	£5,000k
NYCC54	Filey, Yor Sub Area PLP		1162	0	£835k	£327k

NYCC55	Snaith - Coates Marsh Pumping Station Refurb (River Aire)		262	144	£118k	£k
NYCC56	Wistow - Wistow Clough Pumping Station (River Ouse)		1462	804	£381k	£278k
NYCC57	Airmyn - Little Airmyn Pumping Station (River Aire)		1144	629	£75k	£440k
NYCC58	Sherburn in Elmet - Bond Ings Pumping Station		258	142	£117k	£k
NYCC59	Temple Hirst Pumping Station		1581	870	£176k	£535k
NYCC60	Barnby on the Marsh - Lendall Pumping Station		618	0	£k	£618k
	Totals		72,698	35,465	3,595	33,640

FD2656: Strategic Funding Share Tool Version 3.9

User Entries:

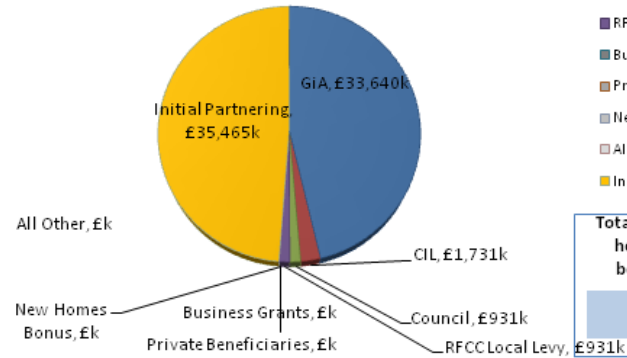
1) What level of government funding is available?	Medium (require OM 130%)	130%
2) Council funding (including highways)	User Defined (Enter £k value > 0 in cell D3)	£1,800k
3) Defra LLFA Grant	User Defined (Enter £k value > 0 in cell D4)	£1,000k
4) Choose strength of RFCC Local Levy	User Defined (Enter £k value > 0 in cell D5)	£1,000k
5) How shall we weight the centralised funding?	Total local flexible funding = £3,800k	
Pay off schemes in order of smallest to largest shortfall, optimize GiA		<input type="button" value="Update"/>

Lead Local Flood Authority: **North Yorkshire County Council**

Date stamp for investigation: 31/07/2012 10:40 **Checks** QA status

Overall Funding Picture - Short Term

Note: Grey segment is funding yet to be found - the "shortfall"



Funding Source

- GIA
- CIL
- Council
- RFCC Local Levy
- Business Grants
- Private Beneficiaries
- New Homes Bonus
- All Other
- Initial Partnering

Total Cash Cost Current Phase

£72,698k

Initial Total LLFA Shortfall

£9,359k

Shortfall, with Local Levy, GiA, CIL, RFCC & Council

£k

Total number of households benefitting

2331

Initial and final FDGiA

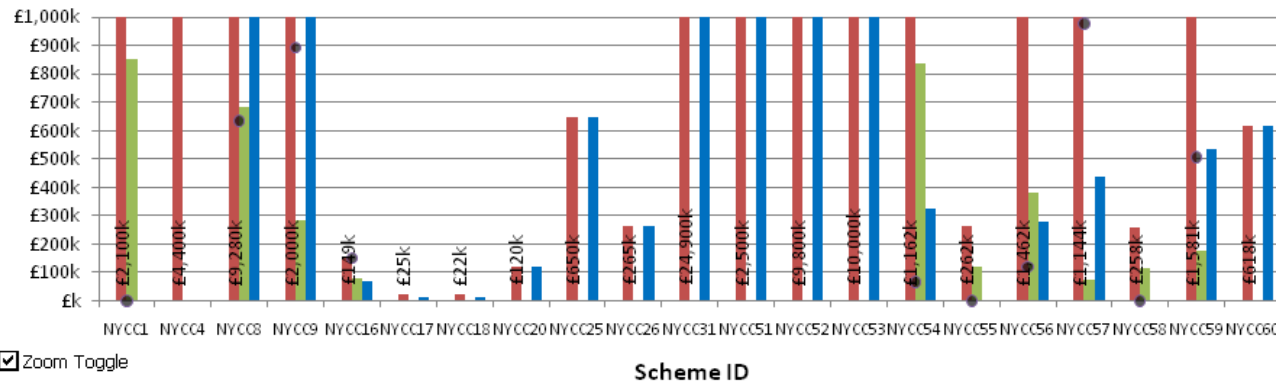
Initial **£27,874k**

Final **£33,640k**

Scheme by Scheme Funding Picture - Short Term

Schemes that would now **17** Paid for **21** Total potential no. of schemes **21**

- Remaining shortfall
- Project cost
- Flexible funding contribution
- Realised FDGiA
- Ratio of extra GiA to flexible funding invested



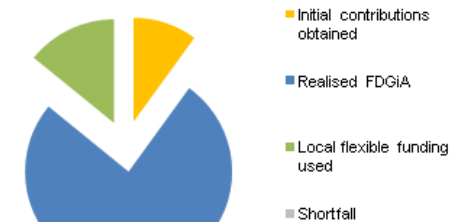
Zoom Toggle

Ratio of extra GiA to flexible funding invested

Choose Scheme **NYCC9**
Final OM Score **130**

Benefitting households: **194**
Deprivation: **Moderate**

Funding Source



Funding Split for Individual Scheme