North Yorkshire County Council

Business and Environmental Services

Executive Members

26 January 2018

Malton, Norton and Old Malton Package of Flood Alleviation Works

Report of the Assistant Director – Highways and Transportation

1.0 Purpose Of Report

1.1 To update the Corporate Director - Business and Environmental Services (BES), in consultation with the BES Executive Members, on the progress to date concerning the development of the business case to support the Malton, Norton and Old Malton scheme

1.2 To request approval from the Corporate Director - BES, in consultation with the BES Executive Members for:

1.3 NYCC to lead on the future delivery of the scheme

1.4 The submission of application to draw £100k of the available Environment Agency Flood Defence Grant In Aid funding to enable scheme development during 2018/19

1.5 The submission of an expression of interest to bid for up to £2.1m European Structural Investment Funds.

1.6 The submission of a full business case to the YNYER LEP Investment Board and to receive Local Growth Fund of up to £500k.

1.7 NYCC to receive funding in the form of third party contributions to enable the delivery of the scheme

1.8 NYCC to offer contribution to any shortfall in the funding of the scheme, up to a value of £450k, from the Flood Risk Management Reserves.

1.9 The continuation of work to identify and work towards funding opportunities, should the bids detailed be unsuccessful.

2.0 Background

2.1 The communities of Malton, Norton and Old Malton have historically all been at inter-related high flood risk principally resulting from the River Derwent, a main river, which flows through the towns.

2.2 In 2005 the EA delivered a flood scheme, to reduce the flood risk from the river Derwent, which involved the inclusion of flood defences and pumps.

2.3 Whilst the EA scheme was successful in protecting properties from the high risk of main-river flooding, the work did not address the additional risk of groundwater and surface water flooding from sewers and other drainage systems, which was previously concealed by the over-topping flood water from the river. Consequently there remains a significant risk to properties in the vicinity of the River Derwent, of flooding from these other sources.

2.4 Castlegate in Malton sits at the bottom of a limestone aquifer, and when the ground is saturated, water leaches from it, flooding the properties in its path. The aquifer spans a very large area surrounding Malton and water can therefore flow through the properties in Castlegate for several weeks, before recovery work can begin, forcing people to vacate their homes and businesses to close.

2.5 The overall aims of the flood alleviation projects are to remove the risk of surface water flooding which is currently undermining investment, economic growth, land and property values and general quality of life in the affected communities.

3.0 Malton, Norton and Old Malton in the wider North Yorkshire Context

3.1 In February 2015 BES Executive Members approved the use of a set of criteria for directing the undertaking of investigations following a flood event. This attempted to quantify the severity of the consequences of flooding in locations reported to NYCC, in order to ensure investigation was undertaken proportionately.

3.2 Malton, Norton and Old Malton, presently ranks as the highest priority location in North Yorkshire for the council, using this criteria.

4.0 Effects of the flood risk on the community and economic growth in Malton, Norton and Old Malton

4.1 When flooding occurs in Malton, Norton and Old Malton residential properties and businesses are at high risk of internal water ingress and associated damage. Businesses in the wider vicinity experience a secondary effect due to inaccessibility caused by the associated road closures, primarily the smaller local businesses on Castlegate. There are consequent related issues with recovery and insurance.

4.2 When flooding occurs there is additional related disruption experienced by any business in the town which rely on Castlegate, Welham Road or the Old Malton approach from the A64 for delivery or trade.

4.3 Ryedale District Council initiates the local recovery following a flood incident. The costs of which are estimated by the authority to be approximately £20k following a flood event.

4.4 Aside from the immediate costs associated with response, insurance and recovery, the repeated flooding leaves residual economic issues, concerning land value and use, the appearance of the immediate area, the transience of its community and its willingness to invest and critically the viability of the area to accommodate businesses.

4.5 All the inter-related problems in Malton and Norton are in close proximity to each other. The associated closure of County Bridge which connects the towns of Malton and Norton therefore has implications on transport links and connectivity between the two communities.

4.6 The repeated property flooding has led to a “transient” community in the vicinity of County Bridge and has degraded the quality of the public realm and undermined property values in this area. Flats are leased on short term lets and anecdotal evidence from landlords suggests that following vacation from property after flooding events, the same occupants rarely move back into the flats, the previous occupants having sourced alternative accommodation. As a result some properties do not have the same residents in them for more than one or two years, and there is a reluctance to invest in the property.

4.7 The residual risk of flooding, coupled with the transience of the community, has led to a “broken windows” effect, surrounding County Bridge, with landlords and property owners feeling a disincentive to adequately maintain properties, which they know are at high risk of water inundation in the future. There are consequently also a number of derelict buildings, including a large office block and a listed property, which further detract from the amenity of the location.

4.8 On the east side of County Bridge, in Norton, the low valued land which is subject to flooding has gradually been occupied by relatively low risk, and low value businesses. It is considered that with investment in a flood scheme, the land, which is in close proximity to the station and is in a location which contains many attractive buildings, has the potential to have its fortunes re-dressed, and to become a location affording positive growth potential to the town.

5.0 Potential benefits and uplift to Natural Capital

5.1 The scheme would also give a potential uplift to natural capital in the location, bringing additional tertiary benefits to both the economy and public health.

5.2 This approach is advocated in the Governments’ 25 year environment plan published 11 January 2018. This advises holistic investment in the environment on natural capital principles and promotes enhancing beauty heritage and engagement with the natural environment.

5.3 The scheme would improve the aesthetic of the corridor between Norton and Malton, people may be encouraged to access Orchard Fields playing fields, Castle Gardens, and the Lady Spring Woods boardwalks if this part of the trip was improved.

5.4 There is also intended to be an economic consideration concerning potential water damage to the castle and roman villa remains.

5.5 County bridge could be an economic draw and the improvement of its aspect could therefore have tourism benefits.

5.6 The scheme potentially includes improved access and heritage uplift in Old Malton through the potential implication on historic fish ponds, and associated habitat restoration.

6.0 Progress to date

6.1 For a number of years, a multi-agency working group comprising the relevant risk management authorities have been working together to coordinate work and mitigate the risk in Malton, Norton and Old Malton.

6.2 The group has produced an emergency pumping plan, led by Ryedale District Council, which leads the work of the responsible organisations including Malton and Norton Town Councils. The Plan directs the deployment of temporary pumps in the ownership of a variety of authorities to attempt to over-pump surface water into the River Derwent from the highway and other critical areas.

6.3 The multi-agency group has also progressed work to develop a flood alleviation scheme which, given the distinct yet inter-related elements, would not be a traditional, single solution flood scheme but would rather see delivery of a package of works, to a number of assets, in various ownerships.

6.4 In 2015 North Yorkshire County Council as Lead Local Flood Authority published an options paper for Malton, Norton and Old Malton, produced by consultants Arup. The paper set out the potential action that could be taken to manage the flood risk in the three inter-related locations. The paper included outline cost estimates for a variety of options, ranging from the purely hypothetical scenario of walking away, through to continuing with emergency response and recovery, and ranging towards a comprehensive range of flood mitigation measures to improve the current defence in the towns.

6.5 The paper offered a cost/benefit analysis for the delivery of a scheme and most critically demonstrated, in principle, that a scheme would give the benefits required to receive EA Flood Defence Grant in Aid (FDGIA).

6.6 The paper (known locally as the Arup report) gave a solid economic basis for the development of a future business case. It gave an estimated projection of the most cost-beneficial combination of options for the town totalling £3m. From this, given the number of properties at risk, the scheme would be eligible for £1.2m of FDGIA, leaving a funding gap of £1.8m to be sourced locally.

6.7 Part of the options considered by the Arup report were measures to reduce the disruption to the transport network during flood events. Such measures did not offer protection to property, but overall offered a wider benefit to the community.

6.8 In 2016 following re-surfacing work on Church Street, ducts were installed under the highway, so that pumping could be undertaken in flood events without the need for road closures.

6.9 In 2017 Yorkshire Water, with permission from Network Rail, extended the ducts to run under the rail track. This meant that pumping could be undertaken without the need to time operations around the train timetable.

6.10 In 2017 Ryedale District Council received approval from its members to consider a contribution of 20% of the shortfall in the scheme costs originally stipulated by Arup, following the potential EA FDGIA contribution. This is a value of up to approximately £350k. It also received approval to contribute to resource to enable the delivery of the scheme.

6.11 North Yorkshire County Council, as Lead Local Flood Authority has continued to progress the scheme development and in 2017 commissioned WSP to progress the work through the EA's assurance process and to produce an outline business case.

6.12 The commission also looked at progressing the evidence to demonstrate the feasibility of the measures for the locations, including a comprehensive drainage study in Old Malton to increase the understanding of the flood mechanisms and so that where possible, work could progress quickly. Ryedale District Council made contribution to this aspect of the work.

6.13 Following rationalisation of the figures during the development of the outline business case, it has become clear that the most cost-beneficial options identified by the Arup report would have a value of nearer to £4m, also, enabling works on existing inter-related drainage systems, to permit the identified options that would be required to function, would potentially more than double the costs of the scheme.

6.14 Tables demonstrating the packages of options, and the current best understanding of the estimated costs and their benefits are included in Appendix 2.

6.15 Work continues to progress on establishing the feasibility of the options, and during the preparation of detailed design options may be subject to change, however it is looking likely that the costs required to enable the original preferred options identified to be delivered would make it prohibitive. At the time of writing, it is looking likely therefore that the options that give the highest amount of benefits within affordability would be Option 3 for Norton, Option 4 for Malton and Option 4 for Old Malton, as demonstrated in Appendix 2, which has a present rationalised value of approximately £3.9m.

6.16 During 2017 Ryedale District Council submitted an expression of interest to the Local Enterprise Partnership for Growth Funding, on behalf of NYCC as identified project lead, which has been viewed favourably and an invitation to submit a full economic business case during 2018 has been offered by officers at the LEP.

6.17 An expression of interest has also been made to Highways England for funds to develop a scheme for Old Malton, given that the A64 drainage system connects to Riggs Road Drain, which flows through Old Malton and eventually discharges into the River Derwent. Work continues with Highways England to identify its proportional responsibility for flows in Riggs Road Drain.

7.0 Package of works identified in the report

7.1 A breakdown of the costs and options are available in the Arup report, however a summary of all the options investigated by Arup and of which the feasibility is to be explored is available in Appendix 1 of this report.

7.2 Initial cost analysis shows a preferred combination of flood alleviation works totalling £3.9m with a net calculated benefit of just under £15m and a consequent BCR of 3.8. In order to mitigate risks in delivery of the project, provide additional contingency and allow for the provision of further essential environmental works an additional 10% or £0.4m has been added to the budget giving a total of £4.3m of the £4.3m of costs under £0.5m is being met by NYCC with the remainder sourced externally. Any additional funding from Highways England will be used specifically for additional related road works.

7.3 Overall funding for the scheme has been identified as follows:

Source	Funding £000's
Environment Agency FDGIA	1,200
Growth Fund (YNYER LEP)	500
ESIF	2,100
Ryedale District Council	350
North Yorkshire County Council	450
Highways England	??
NYMNP	300*
Total	**4,900**

*Not secured

8.0 Future action required to deliver the scheme

8.1 The biggest risk to the delivery of the scheme is the present shortfall in funding, based on the approximate costs of the scheme.

8.2 At the time of writing, no funds are secured, however there is a potential £1.2m available from FDGIA, a potential growth fund contribution, a potential contribution from Highways England, and RDC has committed to providing 20% of the projects shortfall assuming the FDGIA is obtained (approx. £350k).

8.3 The York, North Yorkshire and East Riding Enterprise Partnership has invited submission of a full business case for growth funding, before July 2017, for it to take a view on contributing towards the project following the submission of the expression of interest.

8.4 In December 2017 a call for expressions of interest was made by European Structural Investment Fund, for projects to be delivered under its climate change objectives. The fund is delivered through the LEP administrative areas, and offers 50% intervention with rate with a minimum grant award of £500k. One of the outputs of the project is the reduction of flood risk to businesses and properties.

8.5 Given the projected costs of the Malton, Norton and Old Malton scheme and its objectives it is considered a suitable avenue to pursue in order to secure the shortfall in funding for the scheme.

8.6 There is also potential to work in partnership with the North York Moors National Park on the ESIF bid, and include NFM and upstream catchment attenuation in the bid, with the softer, natural flood management elements delivered by the national parks, with these elements match-funded through its own funds.

8.7 The Regional Flood and Coastal Committee (RFCC) could also be approached in the coming months with a bid towards any future shortfall in the project.

8.8 It is considered that all the funding opportunities detailed should be applied to, thereby increasing the security of the scheme.

9.0 Business Case Development

9.1 At the time of writing works continues with our partners to progress the business case, as agreed by BES Executive Members and the BES Corporate Director at its meeting in February 2017.

9.2 The outline business case, to progress through the EA's assurance processes is completed in draft, and is intended to be submitted during January.

9.3 An appropriate amount of the potential £1.2m FDGIA can be drawn in advance of scheme delivery, to enable the development of the scheme and any associated feasibility work.

9.4 It is considered that an application for an early payment of £100k of the £1.2m FDGIA should be made to cover the future costs of scheme development and any associated studies during financial year 18/19.

9.5 The potential to deliver some aspects of the work independently should full funding not be achieved is being explored, however there is a risk that if full funding is not achieved within a reasonable time that the EA may seek to recover the early payment of the £100k.

9.6 The overall programme is intended to encourage investment and increased economy activity in an area currently suffering from negative impacts of repeated flooding. To secure funding from the Growth Fund and the ESIF the local economic benefits of the scheme will need to be demonstrated in terms of benefits to businesses and residential values. Work to demonstrate this is being developed.

10.0 Legal Implications

10.1 North Yorkshire County Council has permissive powers under Section 14 of the Land Drainage Act (1991) to undertake work to mitigate surface water flooding or groundwater flooding, and to undertake works to ordinary watercourses.

10.2 This scheme would form part of the future work of a wider programme of schemes, initially targeting the locations which experience the most significant effects of flooding. Malton, Norton and Old Malton is the highest priority location for NYCC according to the proposed criteria.

10.3 The scheme involves the undertaking of works on third party assets, and agreements over future maintenance responsibility would be required at the appropriate time.

11.0 Financial Implications

11.1 The estimated total value of the scheme elements to be delivered by NYCC is presently £4.3m. It is however important to stress that the scheme is essentially a package of works and this value is an outline estimate, some elements being subject to third party agreement, and is therefore not definitive at this point in time.

11.2 £1.2m (approx.) would potentially be available from the Environment FDGIA 6 year programme and already appears on the EA's 6 year programme for spending during 18/19 based on the benefits that could be realised.

11.3 This would leave an approximate £3.1m to be sourced locally depending upon the final scheme costs.

11.4 Ryedale District Council has confirmed it would in principle financially support the project to the value of £350,000 if financial contribution cannot be sourced from elsewhere.

11.5 The expression of interest for the growth fund was for the value of £1.1m, however any contribution secured is to be a proportion of its underspend for 2018/19 and so is not likely to realise this value and additional funding would be required to achieve the full scheme.

11.6 An expression of interest has been made to Highways England for a contribution specifically towards the Old Malton aspects of the scheme, however work continues with HE to establish its appropriate contribution based on the impact of its highway drainage system on the downstream drainage in Old Malton.

11.7 An appropriate contribution could be sought of the Regional Flood and Coastal Committee Levy fund, to which NYCC contributes, but at the time of writing work has not begun on this avenue.

11.8 The ESIF call is for projects with a value of at least £1m, with 50% match funding required. The bid could therefore support up to £1.9m of the project value, to match the combined suggested RDC, NYCC and EA FDGIA combined overall spend.

11.9 At the time of writing it is expected that at the end of this financial year there will be £860k available in the flood risk management reserve.

11.10 The committee report to be presented to BES Executive Committee and Corporate Director on 26 January seeks approval for commitments to be made from the Flood Risk Management Reserve on a programme of flood risk management schemes, based on the prioritisation criteria detailed in the report.

11.11 A significant amount of funding and resource has already been committed by the County Council, through its commitment to the publication of the Arup report and its work to develop the outline business case. To date the combined spend has been an approximate £110k, with staff resources also having been required to support this work.

11.12 A contribution by NYCC could enable an application for just under 50% funding of the full scheme value from ESIF. It is therefore suggested that NYCC contributes an additional value of £450k towards the scheme, using the flood risk management reserve, although additional funding avenues would be pursued, including through the RFCC local levy fund.

11.13 Whilst this report seeks the approval of the BES Corporate Director, in consultation with BES Executive Members to bid for funding to finance the project, the approval of the Section 151 Officer is also being sought simultaneously.

12.0 Equalities Implications

12.1 The scheme benefits all those with protected characteristics by reducing the risk of surface water and ground water flooding in Malton, Norton and Old Malton and thereby the associated effects upon businesses, residential properties, the public health of the community living at flood risk and the associated economic growth of the area.

12.2 It is therefore considered appropriate to continue with the scheme as intended, with regular relevant liaison through the engagement channels established as part of the scheme.

12.3 The full Equalities Impact Assessment is included as Appendix 3 of this report.

13.0 Recommendations

13.1 It is recommended that the Corporate Director - BES, in consultation with the BES Executive Members:

i) note the work undertaken by NYCC to date towards the business case;

ii) grant approval for the scheme to be delivered led by NYCC's Flood Risk Management Team;

iii) grant approval to the submission of application to draw £100k of the potential EA FDGIA funding to enable scheme development during 2018/19;

iv) grant approval to the submission of a bid to receive ESIF contribution of c. £1.8m and an RFCC bid towards the scheme;

v) give approval to the continued development of a business case to satisfy both EA and LEP Growth Fund assurance processes;

vi) grant approval in principle to the Council receiving any identified funds from the third parties identified to contribute towards the cost of the scheme;

vii) grant approval to the proportionate contribution by NYCC towards any shortfall in the cost of the scheme, not exceeding £450k, to be taken from the FRM reserve;

viii) grant permission for future funding opportunities to continue to be explored.

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Background Documents:
Malton, Norton and Old Malton Flood Study/Options Report, Arup
BES Executive Committee Report, Feb 2015 – Flood Incident Review Protocol
BES Executive Committee Report, February 2017 –Flood Risk Management Programme Update
BES Executive Committee Report January 2017 – Flood Risk Management Programming Methodology and Scheme Prioritisation Report.

APPENDIX 1 – PACKAGE OF OPTIONS AND OFFICE COMMENT

At the time of writing, scheme options are grouped and costs are estimated accordingly. Work continues to identify the feasibility of each distinct option and its costs and the benefits it delivers, so the costs of individual scheme elements cannot be displayed.

OPTION	OFFICER COMMENT
Do nothing- walk away	This purely hypothetical option would mean withdrawing all risk management authority support to the flooding. It provides a basis upon which to assess the cost benefits of any improvement options suggested.
Do Minimum – sustain existing level of support	This option was included in the original Arup appraisal. It did not give the benefits that some of the combinations of the other packages of works offered.
Improve Local Flood Warning and Telemetry	This is something the EA continues to improve.
Construct Permanent Chambers for Temporary Pumps	At the time of writing estimates demonstrate this to be the most cost beneficial solution for improving the pumping arrangements. This may be subject to amendment as the scheme costs develop.
Local Property Level Protection	Given the circumstances in the towns this maybe the only solution for some properties, and could potentially include resilience measures, reducing the time properties are required to be vacated.
Control of Surface Water Flowpaths, Castlegate	The feasibility of this will continue to be explored during the production of the business case, however the proximity of a scheduled ancient monument and the ground conditions may make this unfeasible in delivery.
Optimise Operation of Mill Beck Pumping Station/upgrading Mill Beck Pumping Station	This is something the EA will continue to explore.
Formalise Pipe Crossing of railway	This option is now complete in partnership with North Yorkshire Highways and Network Rail. A crossing is in place under the highway which will connect to the undertrack crossing to allow overpumping from the sewer network whilst reducing the impact on the highway and rail networks.
Urban Drainage System Maintenance	Routinely undertaken, remove from scheme
Diverting Riggs Road Drain	This concerns the issues in Old Malton. The recent drainage study work supports the development of this option.
Add capacity at existing sewer pumping stations/Auxiliary overflow diversion, Welham Road	The Arup report suggests upgrading the sewer pumping stations across Malton to increase the pumping rate and outflow from flood affected areas. This option has been discussed and is unlikely as increasing the pumping capacity at the pumping stations would need to be partnered with upgrading the rising mains and Malton Sewage Treatment Works to cope with the additional flows. This would lead to an unlikely cost-benefit risk scenario. Whilst the Arup report did recognise there would be a need to accommodate flows with either storage or treatment capacity, the cost did not incorporate this and costed the solution at £2,176,000.

	The upgrading of rising mains and increased treatment capacity would far exceed this.
Formalisation of defence at sewer pumping station	Previously, a sandbag wall has been created at Malton Norton SPS to protect overland flows from breaching the SPS compound. The pumping station asset is raised and does not have a history of being flooded out. However, the sandbags have been placed in the compound previously by the council to stop flows flooding through the compound towards Lidl Car Park. As the asset does not have a history of flooding, this option would not directly benefit the pumping station
Permanent Land Drainage Pumps	At the time of writing estimates demonstrate this to be the lesser cost beneficial solution for improving the pumping arrangements. This may be subject to amendment as the scheme costs develop.

APPENDIX 2 – Malton packaged options and estimated costs**

** Below costs do not include the options for upstream catchment solutions, which is a complimentary measure to the project and is intended to be delivered by the North York Moors National Park Authority.

Malton, Norton & Old Malton Options	1	2	3	4	5	Malton	Norton	Old Malton
Do nothing - Walk away	x					M1	N1	OM1
Do Minimum - sustain existing level of support		x				M2	N2	OM2
Improve Local Flood Warning & telemetry			x	x	x	M3	N3	OM3
Construct permanent chambers for temporary			x	x	x	M3	N3	OM3
Local Property Level Protection			x	x	x	M3	N3	OM3
control of surface water flowpaths - Castlegate				x	x	M4		
control of surface water flowpaths from groundwater emergence - Castlegate				x	x	M4		
Optimise Operation of Mill Back PS			x	x	x		N3	
Urban Drainage System Maintenance			x					OM3
Diverting Riggs Road Drain				x				OM4
Upgrading Mill Beck PS				x	x		N4	
Add capacity at existing Sewer Pumping stations				x	x		N4	
Auxilliary overflow diversion Welham Road				x	x		N4	
Formalisation of defences at sewer pumping station				x	x		N4	
Permanent land drainage pumps					x	M5	N5	OM5

NET PRESENT OPTION COSTS

MALTON	Option M1	Option M2	Option M3	Option M4	Option M5
Existing staff costs					
Further staff costs					
Consultants' fees (10%)	0	0	57,900	50,210	45,210
Contractors' fees (0%)	0	0	0	0	0
Cost consultants' fees (0%)	0	0	0	0	0
Site investigation and survey (5%)	0	0	28,950	25,105	22,605
Construction	0	42,000	820,660	727,940	662,940
Environmental mitigation (0%)	0	0	0	0	0
Environmental enhancement (0%)	0	0	0	0	0
Site supervision (0%)	0	0	0	0	0
Land & compensation (5%)	0	0	28,950	25,105	22,605
Subtotal	0	42,000	936,460	828,360	753,360
Future costs (construction and maintenance)	0	0	0	0	89,670
Optimism bias (40%)	0	0	374,584	331,344	301,344

MALTON	Option M1	Option M2	Option M3	Option M4	Option M5
Project total (present-value) costs	0	42,000	1,311,044	1,159,704	1,144,374

This shows that the estimated cost of implementing solutions at Malton is in the range of £1.14M to £1.31M

NORTON	Option N1	Option N2	Option N3	Option N4	Option N5
Existing staff costs					
Further staff costs					
Consultants' fees (10%)	0	0	91,700	86,100	101,850
Contractors' fees (0%)	0	0	0	0	0
Cost consultants' fees (0%)	0	0	0	0	0
Site investigation and survey (item)	0	0	10,000	15,000	20,000
Construction	0	42,000	1,293,800	1,230,400	1,455,900
Environmental mitigation (0%)	0	0	0	0	0
Environmental enhancement (0%)	0	0	0	0	0
Site supervision (0%)	0	0	0	0	
Land & compensation (5%)	0	0	45,850	43,050	50,925
Subtotal	0	42,000	1,441,350	1,374,550	1,628,675
Future costs (construction and maintenance)	0	0	89,670	104,615	119,560
Optimism bias (40%)	0	0	576,540	549,820	651,470
Project total (present-value) costs	0	42,000	2,107,560	2,028,985	2,399,705

This shows that the estimated cost of implementing solutions at Norton is in the range of £2.0M to £2.4M. *It is estimated that enabling works to the sewer system in Norton to permit the increase in capacity at the sewer systems to be effective would be far in excess of the estimated specific costs of the works identified above and would significantly alter the cost benefit calculation.

OLD MALTON	Option OM1	Option OM2	Option OM3	Option OM4	Option OM5
Existing staff costs					
Further staff costs					
Consultants' fees (10%)	0	0	45,100	28,875	47,975

OLD MALTON	Option OM1	Option OM2	Option OM3	Option OM4	Option OM5
Contractors' fees (0%)	0	0	0	0	0
Cost consultants' fees (5%)	0	0	0	0	
Site investigation and survey (5%)	0	0	22,550	14,438	23,988
Construction	0	84,000	641,400	424,250	691,650
Environmental mitigation (0%)	0	0	0	0	0
Environmental enhancement (0%)	0	0	0	0	0
Site supervision (0%)	0	0	0	0	0
Land & compensation (5%)	0	0	22,550	14,438	23,988
Subtotal	0	84,000	731,600	482,000	787,600
Future costs (construction and maintenance)	0	0	0	59,780	119,560
Optimism bias (40%)	0	0	292,640	192,800	315,040
Project total (present-value) costs	0	84,000	1,024,240	734,580	1,222,200

This shows that the estimated cost of implementing solutions at Old Malton is in the range of £0.8 to £1.2M.

OPTION Evaluation

Malton Norton, Old Malton - Surface / Ground Water Flood alleviation measures - BCR analysis.

Malton Options	Present value costs (£'000s)	Present value damages (£'000s)	Present value benefits (£'000s)	net value of benefits (£'000s)	BCR (net)
M1	-	10,189	-	- 10,189	
M2	42	4,527	5,662	1,135	27.02
M3	1,311	1,901	8,288	6,387	4.87
M4	1,160	1,868	8,321	6,453	5.56
M5	1,144	1,556	8,633	7,489	**6.55**

Although M1 has the highest BCR in this model M5 is preferred as having a significantly higher value of net benefits - almost £7.5m compared with just £1.1m in scenario M1 and also a relatively high BCR of 6.55

Norton Options	Present value costs (£'000s)	Present value damages (£'000s)	Present value benefits (£'000s)	net value of benefits (£'000s)	BCR (net)
N1	-		-	- 15,428	
N2	42	12,047	3,381	- 8,666	-206.33
N3	2,108	5,410	10,017	4,607	2.19
N4	2,029	5,168	10,259	5,091	**2.51**
N5	2,400	4,774	10,654	5,880	2.45

Old Malton Options	Present value costs (£'000s)	Present value damages (£'000s)	Present value benefits (£'000s)	net value of benefits (£'000s)	BCR (net)
OM1	-	3,759	-		
OM2	84	2,671	1,087	- 1,584	-18.86
OM3	1,024	1,276	2,482	1,206	1.18
OM4	735	506	3,252	2,746	**3.74**
OM5	1,222	485	3,274	2,789	2.28

BCR of prefferred Options

Total of M5, N4, OM4	Present value costs (£'000s)	Present value damages (£'000s)	Present value benefits (£'000s)	net value of benefits (£'000s)	BCR (net)
	3,908	7,230	22,144	14,914	**3.82**

BCR across all prefferred schemes of 3.82

Across prefferred schemes a net benefit of just under £15m is achieved

North Yorkshire County Council

APPENDIX 3

Equality impact assessment (EIA) form: evidencing paying due regard to protected characteristics

(Form updated May 2015)

Malton, Norton and Old Malton Flood Alleviation Scheme

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যদি আপনি এই ডকুমেন্ট অন্য ভাষায় বা ফরমেটে চান, তাহলে দয়া করে আমাদেরকে বলুন।

如欲索取以另一語文印製或另一格式製作的資料，請與我們聯絡。

اگر آپ کو معلومات کسی دیگر زبان یا دیگر شکل میں درکار ہوں تو برائے مہربانی ہم سے پوچھئے۔

Equality Impact Assessments (EIAs) are public documents. EIAs accompanying reports going to County Councillors for decisions are published with the committee papers on our website and are available in hard copy at the relevant meeting. To help people to find completed EIAs we also publish them in the Equality and Diversity section of our website. This will help people to see for themselves how we have paid due regard in order to meet statutory requirements.

Name of Directorate and Service Area	Business and Environmental Services, Network Strategy
Lead Officer and contact details	Emily Mellalieu – 01609 534876
Names and roles of other people involved in carrying out the EIA	Mike Douglas

How will you pay due regard? e.g. working group, individual officer	Malton, Norton and Old Malton Flood Alleviation Working Group would consider any points identified.
When did the due regard process start?	Following identification of the scheme options, Jan 2016.

Section 1. Please describe briefly what this EIA is about. (e.g. are you starting a new service, changing how you do something, stopping doing something?)

The proposal is for NYCC to lead on a package of works to address the risk of surface water and ground water flooding in Malton, Norton and Old Malton.

Section 2. Why is this being proposed? What are the aims? What does the authority hope to achieve by it? (e.g. to save money, meet increased demand, do things in a better way.)

The County Council has powers under the Land Drainage Act (1981) to undertake works to alleviate the risk of surface and groundwater flooding.
The towns of Malton, Norton and Old Malton experience significant disruption as a result of flooding events and recovery. There is an impact on public health and economic growth in the location, with damage to property occurring, and disruption to crucial transport links, businesses and local infrastructure.

Section 3. What will change? What will be different for customers and/or staff?

The risk of flooding in the towns will decrease. The residual impact of flood events will lessen.

Section 4. Involvement and consultation (What involvement and consultation has been done regarding the proposal and what are the results? What consultation will be needed and how will it be done?)

There has been a previous workshop and engagement undertaken in 2015 by NYCC and partners.
During 2017 officers attended both responsible town councils to discuss the schemes.
Work has commenced with Ryedale District Council and Malton and Norton Town Councils to create a community engagement group to support the scheme development and to enable consultation and liaison and community ownership of the project.

Section 5. What impact will this proposal have on council budgets? Will it be cost neutral, have increased cost or reduce costs?

Please explain briefly why this will be the result.

The scheme value is estimated to be £3.7m. Of this amount, £1.2m is potentially available through the Environment Agencies FDGIA programme, £360k is offered by Ryedale District Council and other relevant funding opportunities are sought.

To date approximately £110k has been invested by NYCC on scheme development, and it is proposed that an additional £250k would be contributed to the scheme by NYCC which would be drawn from the Flood Risk Management Reserve pot.

Section 6. How will this proposal affect people with protected characteristics?	**No impact**	**Make things better**	**Make things worse**	**Why will it have this effect? Provide evidence from engagement, consultation and/or service user data or demographic information etc.**
Age		X		The scheme will improve things for all protected characteristics, as it will reduce the risk of property flooding in the location, reduce the risk of transport disruption during flood events and potentially improve the land value and economic prosperity of the area.
Disability		X		As above
Sex (Gender)		X		As above
Race		X		As above
Gender reassignment		X		As above
Sexual orientation		X		As above
Religion or belief		X		As above
Pregnancy or maternity		X		As above
Marriage or civil partnership		X		As above

Section 7. How will this proposal affect people who…	**No impact**	**Make things better**	**Make things worse**	**Why will it have this effect? Provide evidence from engagement, consultation and/or service user data or demographic information etc.**
..live in a rural area?		X		Malton and Norton are the market towns serving a wide geographic area, during flood events transport links are affected on both arterial routes into the towns, making access to services difficult. By reducing the risk of this, the scheme will improve the scenario for those living in a rural area.

…have a low income?		X		The scheme will reduce the likelihood of flooding and reduce the flood risk in the towns, this will make things better for those on low incomes who often more keenly feel the residual effects of flood incidents, through raised costs of insurance premiums and associated costs of re-housing and renting accommodation during recovery. Those on low incomes are also often the least likely to be able to undertake works to their property to reduce the residual risk, and therefore are often most susceptible to water ingress during flood events.

Section 8. Will the proposal affect anyone more because of a combination of protected characteristics? (e.g. older women or young gay men) **State what you think the effect may be and why, providing evidence from engagement, consultation and/or service user data or demographic information etc.**

As above the scheme can only make things better for all those with protected characteristics or a combination of them, as it seeks to reduce the flood risk in the communities of Malton, Norton and Old Malton which will be beneficial for all.

Section 9. Next steps to address the anticipated impact. Select one of the following options and explain why this has been chosen. (**Remember:** we have an anticipatory duty to make reasonable adjustments so that disabled people can access services and work for us)	**Tick option chosen**
1. No adverse impact - no major change needed to the proposal. There is no potential for discrimination or adverse impact identified.	**X**
2. **Adverse impact - adjust the proposal -** The EIA identifies potential problems or missed opportunities. We will change our proposal to reduce or remove these adverse impacts, or we will achieve our aim in another way which will not make things worse for people.	
3. Adverse impact - continue the proposal - The EIA identifies potential problems or missed opportunities. We cannot change our proposal to reduce or remove these adverse impacts, nor can we achieve our aim in another way which will not make things worse for people. (There must be compelling reasons for continuing with proposals which will have the most adverse impacts. Get advice from Legal Services)	
4. Actual or potential unlawful discrimination - stop and remove the proposal – The EIA identifies actual or potential unlawful discrimination. It must be stopped.	

Explanation of why option has been chosen. (Include any advice given by Legal Services.)

As the scheme will improve things for all protected characteristics there is no need to alter the detail or direction of the scheme.

Section 10. If the proposal is to be implemented how will you find out how it is really affecting people? (How will you monitor and review the changes?)

Through liaison with the town councils and the associated community engagement flood group.

Section 11. Action plan. List any actions you need to take which have been identified in this EIA, including post implementation review to find out how the outcomes have been achieved in practice and what impacts there have actually been on people with protected characteristics.

Action	Lead	By when	Progress	Monitoring arrangements

Section 12. Summary Summarise the findings of your EIA, including impacts, recommendation in relation to addressing impacts, including any legal advice, and next steps. This summary should be used as part of the report to the decision maker.

The scheme benefits all those with protected characteristics by reducing the risk of surface water and ground water flooding in Malton, Norton and Old Malton and thereby the associated effects upon businesses, residential properties, the public health of the community living at flood risk and the associated economic growth of the area.

It is therefore considered appropriate to continue with the scheme as intended, with regular relevant liaison through the engagement channels established as part of the scheme.

Section 13. Sign off section

This full EIA was completed by:

Name: Emily Mellalieu
Job title: Flood Risk Management Team Leader
Directorate: BES
Signature: E Mellalieu

Completion date: 5.1.2018

Authorised by relevant Assistant Director (signature): *Barrie Mason*

Date: *15.01.18*