



Report to the Scottish Ministers

Flood Risk Management (Scotland) Act 2009

Flood Risk Management (flood protection schemes, Potentially Vulnerable Areas and local Plan Districts) (Scotland) Regulations 2010

Flood Protection Scheme Whitesands, Dumfries 2017

Report by Dan Jackman and Lorna McCallum, Reporters appointed by the Scottish Ministers

- Case reference: FPS-170-1
- Site Address: Whitesands, Dumfries, DG1 2RT.
- The order sought: Flood prevention scheme promoted by Dumfries and Galloway Council and submitted to the Scottish Ministers for confirmation on 7 August 2017.
- Objectors: 322 objectors as Listed in Appendix 1
- Dates of inquiry / hearing sessions: 6 to 21 November and 4 to 7 December 2018

Date of this report and recommendation: 13 September 2019



CONTENTS

Page

Summary Report	2
Preamble	9
Abbreviations used in the report	11
Chapters	
1. Procedural Matters	12
2. Background and Context	18
3. Technical Matters	25
4. Visual and Heritage Impacts	58
5. Impacts on Ecology	78
6. Impacts on Town Centre, Tourism and Parking	87
7. Community Engagement	102
8. Modifications, Conditions and Other Matters	112
9. Overall Conclusions and Recommendations	127
Appendices	
Appendix 1: List of Objectors	
Appendix 2: Appearances and Evidence	
Appendix 3: Recommended Conditions	
Appendix 4: Comments Received but not Considered (Correspondence from Other Parties Opposed to the Order)	
Appendix 5: Inventory of Documents	



• Case reference	FPS-170-1
• Case type	Flood Prevention Scheme
• Reporters	Dan Jackman and Lorna McCallum
• Promoting authority	Dumfries and Galloway Council
• Other Parties	Save Our Sands, Oliver Mundell MSP, Darren Miller, Morag McDonald, John White and others as listed in Appendix 2
• Date of order	1 February 2017
• Date case received by DPEA	16 February 2018
• Methods of consideration and dates	Written submissions and accompanied site inspections on 4, 5 and 6 December 2018 Unaccompanied site inspections on 21 and 22 July, 6 October 2018, 13 April and 22 June 2019. Inquiry sessions on 7,8,9,13,14,20 and 21 November and 3 and 4 December Hearing sessions on 6 November and 7 December
• Date of report	13 September 2019
• Reporters' recommendation	To confirm the flood protection scheme

SUMMARY

The proposed scheme

1. The purpose of the scheme is to provide protection from flooding for up to and including the 1 in 75 year return period at Whitesands, Dumfries. The scheme is intended to provide protection for around 107 non-residential and 59 residential properties in that part of the town. The scheme is intended to have a lifespan of 100 years.

2. The key features of the scheme are:

- A raised walkway set on top of a grassed bund.
- A series of flood walls topped with glass panels.
- 460 metres of temporary demountable metal barriers designed to fix to the glass panels along Whitesands and other specific locations.
- 23 flood gates or flip up flood barriers.
- Alterations to the sewer system to mitigate flooding from the sewer and drainage network.

- Removal of the vegetated berm at the easternmost arch of Devorgilla Bridge.

The council's justification for the scheme

3. The [Flood Risk Management \(Scotland\) Act 2009](#) places a duty upon local authorities to exercise their flood risk related functions with a view to reducing overall flood risk. The Whitesands area of Dumfries experiences flooding from the River Nith and SEPA has identified this as a Potential Vulnerable Area. The scheme is one of the 42 prioritised schemes set out in SEPA's Flood Risk Management Strategies and is identified within the Solway Flood Risk Management Plan.
4. Flooding at this area has been an annual occurrence since 2003 and causes damage to properties and disruption to Whitesands and other parts of the town, particularly as Whitesands is one of the main arterial routes through the town. Regular flooding has discouraged investment and contributed to the gradual under-utilisation of the area. It is intended that the scheme would act as a catalyst for regeneration of this area.
5. The earthen bund and flood walls, including the glass panels, are designed to offer a permanent 1 in 25 years return period standard of protection. The use of demountable metal panels above the glass panels is intended to provide protection for up to a 1 in 75 years return period flood event. The scheme is designed to protect riverside areas at Whitesands and surrounding areas. It is also designed to alleviate flooding from the sewer and drainage network and underground watercourses.
6. There would be some impacts on views and parking. However it is considered that the proposed scheme offers a balance between impacts and protection and provides the optimum technical, environmental and economic solution to flood risk management for the area. The scheme would improve the riverside area and enhance the public realm and parking lost would be replaced elsewhere within reasonable walking distances. The mitigation measures proposed would address any adverse effects, including upstream impacts.
7. The scheme has been developed in consultation with the public and other stakeholders.

Objections

8. The parties who formally objected to the order are listed in Annex F and are contained within [Annex G](#) of the councils' submissions. [Annex H](#) summarises the main issues raised in those objections. The council's response to the objections is contained within [Annexe J](#). In terms of the points of objection raised the most common reasons for opposing the order, in descending order, are that the scheme is too costly/a waste of money, loss of views/visual impact, alternative schemes have not been given proper consideration, loss of car parking and upstream impacts.
9. The objectors who took part on the inquiry proceedings included representatives from the Save Our Sands group, Ms Morag MacDonald, Mr Darren Miller, Oliver Mundell MSP and Mr John White.

10. Some parties also raised procedural matters relating to the council's notification of the scheme and that the Environmental Statement did not comply with the relevant regulations. Those matters are addressed within chapter 1.

Save Our Sands

11. The design chosen is not the best option for Dumfries and does not have broad public support. A more modest scheme would avoid adverse impacts and would address flooding of the levels that are experienced regularly at Whitesands. It is requested that the order be rejected, should that not be the case then it is requested that it be modified, this matter is addressed in chapter 8.

12. The main concerns are:

- Loss of views and parking and consequent impacts upon businesses at the Whitesands and the town centre.
- Adverse heritage and townscape impacts, in particular in relation to the fabric and setting of Devorgilla Bridge and the character of the conservation area.
- Concerns over technical matters including the reliability of the hydraulic modelling, the robustness of the scheme and the potential up and downstream impacts.
- Other options have not been robustly or fairly considered, in particular a self-rising barrier.
- The scheme has not included an allowance for climate change.
- That the costs exceed the benefits.
- There has been lack of information on compensation payments.
- Community engagement has been inadequate and ineffective and public views have been disregarded.

Morton Fraser

13. There is no opposition in principle to a flood protection scheme at Whitesands. The objection to the scheme currently proposed is a result of the serious concerns that it would have an adverse effect on the properties and residents at Nunholm.

14. The hydraulic modelling does not form a reliable baseline upon which to make an assessment of the impacts of the scheme and it omits a number of matters, including climate change. It is not possible to have confidence that the mitigation proposed in relation to upstream impacts would be effective when climate change is taken into account. Displacement of flood water to sensitive residential areas does not accord with the Ministers' duty to reduce overall risk of flooding in the 2009 Act and Scottish Planning Policy.

Ms Morag MacDonald

15. The council's public engagement and consultation process failed to meet the National Standards for Community Engagement. The consultation that has taken place has not been meaningful, it has pursued and promoted one option, the earthen bund, and failed to meaningfully and fairly consider alternatives, particularly the self-rising barrier. The petition that was the product of the consultation process should have been taken into account.

16. The scheme has potential to result in flooding up and downstream.

17. The replacement car parking is less secure and convenient than the parking at Whitesands

Mr Darren Miller

18. The dependence on direct measures at Whitesands is motivated by economic and political rather than hydrological factors. Upstream measures to alleviate flooding should be investigated before a final decision is reached on the scheme.

19. The condition and capacity of the underground drainage network and the culverted watercourses has not been fully assessed.

20. In terms of archaeological requirements the council should take a wider view and include the Whitesands public toilet, the Sandy Opening and the culverted watercourses.

Oliver Mundell MSP

21. The scheme is unfit for purpose and is too expensive, other less intrusive systems have not been properly looked at and should be considered. A scheme that is more appropriate to this historic location should be sought. A number of the concerns could be avoided by relocating the scheme, potentially on the other side of the road at Whitesands.

22. Insufficient studies have been undertaken of the impacts of changes in water flow on wildlife.

23. Whitesands is not an underused part of the town, it has higher occupancy rates and footfall than other areas. Inadequate information is available to assess impacts on local businesses, the town centre and tourism. Changes to the parking and bus stances could harm local businesses and drive trade out of the already struggling town centre.

Mr John White

24. The scheme would not provide a satisfactory solution to the long standing issue of flooding at Whitesands. The same objective can be achieved with considerably less expenditure, other options should be investigated including the self-rising wall. The height of the scheme does not include an allowance for climate change.

Reporters' Conclusions

Technical matters

25. The hydraulic modelling has been developed over many years by recognised specialists. It has been independently verified by SEPA. Whilst no model can ever replicate the complex processes of an extreme flooding event, we are satisfied that it represents the best available evidence and provides the only suitable basis for considering the scheme. The modelling indicates that the scheme would meet the objective of reducing flooding in the Whitesands area.

26. We accept that the Nunholm area also floods. We can understand why residents would expect the appropriate authorities to address their concerns. The model suggests an increase in water depth at Nunholm of 6 cm as a result of the scheme. However, 6 cm, in the context of this stretch of the River Nith is within modelling tolerances. It should be noted that SEPA's threshold for modelling tolerances for a detailed local model is plus/minus 15 cm. In any event, no increase is predicted if the sediment berm is removed. Overall, we find that there is no reason to assume that the proposed scheme would increase up or down stream flooding. The proposed scheme would not preclude a future scheme for the Nunholm area. We note that the relevant authorities have a continuing duty to reduce flood risk and we would expect that they will work with the Nunholm residents to continue to appropriately manage flood risk.

27. Although there is no single options appraisal, various alternative technical approaches have been assessed. Any option to reduce flood risk in the Whitesands area would have a mix of advantages and disadvantages. Overall, no obviously superior technical option has been identified that would lead us to question the proposed scheme. We have found no reason to conclude that the scheme may not withstand the force of the flood water or that the design is vulnerable to failure. We are content that it has been demonstrated that, technically, the scheme is feasible and is not a disproportionate response to address flooding at Whitesands.

28. The focus for the cost benefit analysis is to ensure the efficient use of public money. A standard methodology is used for all flood defence schemes in the UK and this relies on a set of consistent assumptions. It is appropriate that these same assumptions are applied to Dumfries for comparison purposes. We consider that some of the objectors have underestimated the effect on the annual average cost of damages avoided from extreme flooding events. The council's analysis shows that the proposal is cost effective (i.e. the costs of building the scheme are justified by the savings from avoiding flood damage). However, we note that the council's analysis has not been independently verified.

29. The scheme includes improvements to the water drainage infrastructure. The council has worked with Scottish Water to develop these improvements. The technical details have yet to be finalised. Scottish Water has a duty to provide and maintain a sewer system within certain statutory parameters. We can see no reason why Scottish Water would adopt changes to its system that would be detrimental to its operation.

Visual and Heritage Impacts

30. There would be some adverse impacts on heritage assets including upon the setting of Devorgilla Bridge but these would not affect their cultural significance. The scheme

would also erode the historical connection between the town and the river but impacts would be localised. Overall we find the impacts on heritage assets to be acceptable.

31. The scheme would interrupt the connection between the key townscape components including the link between the town centre and the river at Whitesands. It is clear that Whitesands would profoundly change as a place, however, whether the changes would be an improvement is a subjective judgement.

32. Many of the objectors give a high amount of importance to views of the river and Devorgilla Bridge, particularly from Whitesands. The scheme would result in a reduction in views to pedestrians on the footways at the road and adjacent to the buildings on Whitesands. Views of the river from Whitesands are location and time sensitive but they are clearly part of the attraction of this part of the town to both locals and visitors. However, the best views from the riverside walkway would remain.

33. The scheme involves an inevitable trade-off between the benefits of enhanced protection from flooding and heritage, townscape and visual impacts. However, if it is accepted that there is a need for the scheme then we believe that the adverse townscape and visual impacts are outweighed by the benefits of improved flood defences.

Ecology

34. The site of the Flood Protection Scheme is approximately 5 kilometres from the Solway Firth SAC. Having regard to the studies conducted as part of the EIA process, and the advice from Scottish Natural Heritage, our assessment is that the scheme could proceed with no likelihood of there being an adverse effect on the integrity the SAC.

35. There are European Protected Species present and therefore there is the potential that they could be impacted by the proposed scheme. However, this has been assessed in the submitted ES. Subject to appropriate conditions, there is no reason to assume any impacts would be unacceptable, or, if in the event a licence is required, that it would not be forthcoming

Impacts on Town Centre, Tourism and Parking

36. We recognise that Whitesands is a busy part of the town centre, and agree that the existing parking is convenient for the businesses at this location and for those on High Street and in the town centre. There would be a net loss in the quality of parking as a result of the scheme.

37. We consider that there would be some adverse economic impacts as a result of the scheme and the associated removal of parking at Whitesands, particularly in the short term when disruption during the construction period would be inevitable. In the longer term the impacts are less certain. Over the lifetime of the flood defence scheme it is inevitable that there will be changes to shopping patterns, footfall and land uses. It is likely that such impacts would vary spatially and at different times, with or without the proposed scheme. It is therefore not possible to realistically assess the long term economic impacts of the scheme on the town centre.

38. It is also difficult to predict any wider economic benefits of the scheme. A major flood event may never happen. On the other hand the council could be correct and the raised

walkway increases visitors and investment. We accept that the potential economic impacts must be assessed in reaching an overall conclusion. However, in the face of such uncertainty it would be prudent to adopt a conservative approach to assumed economic benefits.

Community Engagement

39. The council has clearly consulted widely and has involved the public at various stages in the development of the proposed scheme. We are content that people were not prevented from making their views known and had adequate opportunity to do so. We are satisfied that it is unfair to describe the community engagement as fundamentally flawed and find that it accords with the guidance and advice from the Scottish Government. The council is clearly aware of the views of the objectors but nonetheless decided to publish the order. That is not the same as ignoring public opinion and the council has been able to justify, with evidence, its choices. We do not believe that reaching a consensus is realistic and is why the promotion of flood protection schemes has been given to democratically accountable councils.

Modifications and Conditions

40. The modifications proposed by the objectors would be fundamentally different in terms of the nature of the scheme, its geographical location, spatial extent and potential impacts. In our view it would not be competent for the changes proposed to be treated as modifications as they would be fundamentally different to the proposed scheme. We have recommended a set of conditions based upon a version prepared by the council and discussed at the conditions hearing.

Overall Conclusions

41. The council has a statutory duty to reduce flood risk and the need for a flood protection scheme at Whitesands is recognised in SEPA's Flood Risk Management Strategies and is identified within the Solway Flood Risk Management Plan. The scheme would significantly reduce flood risk to a large number of residential and business properties. We have had regard to social, environmental and economic impacts and accept that there would be some adverse impacts but we find that the impacts of the scheme are acceptable.

42. The scheme is a technically complex project involving difficult trade-offs. Overall, we consider that taking account of technical, budgetary and other constraints the scheme represents a justifiable, technically feasible and cost effective solution to the risk of regular and potentially devastating effects of flooding at Whitesands while minimising the impact on the landscape and environment.

43. We have taken all the matters raised by the objectors into account, but none provide sufficient grounds for modifying or refusing to confirm the scheme.

Recommendation

44. Subject to paragraph 9.57 we recommend that the Whitesands, Dumfries flood protection scheme be confirmed.

Scottish Government
Planning and Environmental Appeals Division
4 The Courtyard
Callendar Business Park
Callendar Road
Falkirk
FK1 1XR
DPEA case reference: FPS-170-1

The Scottish Ministers
Edinburgh

Ministers

In accordance with our minutes of appointment dated 29 March 2018 we conducted an examination in connection with objections to the Whitesands Flood Protection Scheme, Dumfries. The scheme was submitted by Dumfries and Galloway Council to the Scottish Ministers under paragraph 5 (5) of schedule 2 of the Flood Risk Management (Scotland) Act 2009. The inquiry was held as required by paragraph 7 (2) of schedule 2 because objections were made to the scheme which were not withdrawn.

We held a pre-examination meeting on 1 August 2018 where it was agreed that background and context, technical matters, visual and heritage impacts, impact on the town centre, tourism and parking, community engagement would be addressed at inquiry sessions. In addition it was agreed that there would be hearing sessions on background and context and on other matters and conditions. It was also agreed that further written submissions would be invited until 7 September 2018.

The inquiry sessions involving 26 witnesses were held between 6 - 9, 13, 14, 20 and 21 November 2018 and 4 and 5 December 2018. The hearing sessions took place on 6 November and 7 December 2018. Closing submissions were exchanged in writing, with the final closing submission (on behalf of the council) being lodged on 28 January 2019.

We conducted unaccompanied inspections of the site, its surroundings and other locations referred to in evidence on 21 and 22 July 2018, 6 October 2018, 13 April 2019 and 22 June 2019. Accompanied site inspections took place on 4, 5 and 6 December 2018.

Our report takes account of the objections to the scheme received by the council, further written submissions, written statements, precognitions, closing submissions and documents and other supporting information submitted by the parties. It also takes account the discussion at the inquiry and hearing sessions and the Environmental Statement. An inventory of documents is provided within Appendix 5.

Our report is arranged on a topic basis and we have addressed the objections within the relevant chapters. Annex F of the council's submissions provides details of the objections received, two objections have subsequently been withdrawn. Appendix 1 lists the objectors, details the matters raised by each and the chapters within which their objections are addressed. Some parties made objections out with the statutory period but we have not considered them within this report, these are contained within Appendix 4 of our report.

In our report we firstly address the objections raised by the main party, Save Our Sands and then any additional points raised by those individuals who participated in the inquiry sessions or hearings followed by any remaining points of objection contained in further written submissions or in the original letters of objection. We also address the written submissions from Morton Fraser solicitors on behalf of residents of the Nunholm area of Dumfries, some of whom formally objected to the order. Appendix 2 provides a list of appearances and the evidence covered by each witness.

Abbreviations

AOD	Above Ordnance Datum
CAR	The Water Environment (Controlled Activities) (Scotland) Regulations 2011
CCTV	Close Circuit Television
CEMP	Construction Environment Management Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
Cm	Centimetres
DPEA	Scottish Government Planning and Environmental Appeals Division
ECow	Ecological Clerk of Works
EIA	Environmental Impact Assessment
ES	Environmental Statement
HES	Historic Environment Scotland
Km	Kilometres
HRA	Habitats Regulations Appraisal
Mm	Millimetres
MSP	Member of the Scottish Parliament
NPF3	The 3rd National Planning Framework
PAN	Planning Advice Note
PMO	Planning Monitoring Officer
RAMSAR	Site of international ecological importance on the Ramsar list
SAC	Special Area of Conservation
SEPA	Scottish Environment Protection Agency
SNH	Scottish Natural Heritage
SPA	Special Protection Area
SPP	Scottish Planning Policy
SSSI	Special Scientific Interest
2009 Act	The Flood Risk Management (Scotland) Act 2009
2010 Regulations	The Flood Risk Management (Flood Protection Schemes, Potentially Vulnerable Areas and Local Plan Districts) (Scotland) Regulations 2010 (see paragraph 1.26)

CHAPTER 1 Procedural Matters

Introduction

1.1 On [27 April 2018](#), Morton Fraser Solicitors, on behalf of a number of residents in the Nunholm area of Dumfries wrote to us expressing the view that Dumfries and Galloway Council had failed to properly carry out the notification requirements of the Flood Risk Management (Scotland) Act 2009 (2009 Act) and that therefore the examination should not proceed. The council responded to this in a letter dated [24 May 2018](#).

1.2 On [25 May 2018](#), Morton Fraser Solicitors, wrote a further letter stating that in their opinion the submitted Environmental Statement (ES) was inadequate and failed to comply with the relevant regulations. Again, the examination should not therefore proceed. The council responded to this in a letter dated [3 September 2018](#).

1.3 These two procedural matters were discussed at the pre-examination meeting held on 1 August 2018 (see [note of meeting](#)). We stated at the meeting that we would address the legal submissions in our report. We also sought confirmation that Scottish Ministers were content that we proceeded with the examination. On 24 September 2018 we received confirmation that Scottish Ministers wished us to proceed with the arrangements for the examination as previously instructed,

Notification Arrangements

Case for Nunholm Residents

1.4 The 2009 Act sets out the notification requirements that must be carried out. The Whitesands Project Flood Protection Scheme would be invalid if the notification arrangements were not properly carried out and Scottish Ministers could not confirm such a scheme. The Nunholm residents reserve the right to challenge the scheme in the courts if the matter of proper notification has not been resolved.

1.5 The [committee report](#) dated 19 December 2016 (para 3.27) relating to the principle of publishing the scheme stated that the following should be notified:

- Properties within the 1:75 year flood envelope
- Properties within 20 metres from works required by the scheme
- Any other properties that would be impacted by the project

1.6 Nunholm would fall within the 1:75 year flood envelope so by this criteria properties in Nunholm should have been notified. In addition, the council's own hydrological model shows that as a result of the proposed works, flood levels in the Nunholm area would increase by 0.06 metres – 0.07 metres. The proposed works alter the flow of water and the council knows that this would affect the Nunholm area. The council's proposed mitigation measures, the removal of the sediment berm at Devorgilla Bridge, provide no guarantee that this alteration of flood levels can be controlled.

1.7 It would not have been self-evident, particularly for lay property owners, that the proposed scheme could affect their property. Without notification, these property owners

would be completely unaware of potential impacts. As they have not been notified, when they should have been, these property owners have been denied the opportunity to comment and therefore ensure that the examination considered these issues. This includes at least the 23 property owners listed in Appendix A of the letter dated 24 April 2018, who had they been properly notified, would have objected to the proposed scheme.

Case for the Council

1.8 The notification provisions relate to the proposed scheme as a whole. The proposed scheme (including the removal of the berm) will not have any impact on the properties in Nunholm and therefore there is no requirement for the council to notify properties in Nunholm.

1.9 It should also be noted that Schedule 2 of the 2009 Act lists a range of notification mechanisms, including advertisement in the local paper and site notices. The council carried out these requirements. The formal notification requirements set out in the Act have to be seen in the context of extensive public consultation carried out over several years. The council has been in correspondence with a number of Morton Frasers' clients in list A and B both before and after the publication of the scheme.

1.10 In any event, substantial prejudice has not occurred as the matter of the impact of the proposed order on Nunholm has been considered by the Reporters in terms of the written submissions made on their behalf by Morton Fraser. The appropriate notification requirements were carried out and in any event, no substantial prejudice has occurred. There is no legal basis, in terms of notification, for Scottish Ministers to decline to confirm the proposed scheme.

Others

1.11 Save Our Sands, Mr Oliver Mundell MSP and objections No 287 and 332 repeated concerns that notification arrangements may not have been carried out properly and therefore some people may have been denied the right to comment.

Reporters' Conclusions

1.12 Section 60 of the 2009 Act relates to flood protection schemes. Subsection 3 states that Schedule 2 of the Act makes provisions for the making of flood protection schemes.

1.13 Paragraph 12 of Schedule 2 sets out the circumstances where Scottish Ministers decision to confirm a scheme can be challenged. This includes a failure to comply with any procedural requirements set out in Schedule 2 or any other appropriate regulations. Whilst ultimately only the courts can provide the definitive interpretation of legislation, it would be prudent for Scottish Ministers to satisfy themselves that the procedural requirements have been followed. Scottish Ministers may want to seek their own legal advice in this regard.

1.14 Paragraph 1 of Schedule 2 sets out the notification requirements that must be followed. The only paragraph where a failure is alleged is 1 (d). There is no suggestion that any of the other paragraphs have not been followed.

1.15 Paragraphs 1 and 1 (d) (i) state that:

“The Local Authority must give notice of a proposed flood protection scheme to every person known to the local authority to have an interest in any land on which the proposed operations are to be carried out ...”

The map accompanying the proposed scheme delimits the land directly affected by operations in red. None of these areas fall in the area of Dumfries that we understand is considered to be Nunholm. Therefore paragraph 1(d) (i) does not apply.

1.16 On the other hand, paragraphs 1 and 1(d) (ii) state that:

“The Local Authority must give notice of a proposed flood protection scheme to every person known to the local authority whose interest in any other land may be affected by any alteration in the flow of water caused by any of the proposed operations”

It appears to us that it is this paragraph that Morton Fraser seeks to rely upon as in their opinion, based on the council’s hydrological model, the proposed scheme would see an increase in flood levels in the Nunholm area. The council denies that the scheme as a whole (i.e. with the removal of the berm) would have any effect on the flood levels in Nunholm.

1.17 It has to be recognised that whether a proposed flood scheme affects the flow of water will be dependent on a prediction. In turn, a prediction of a complex, extreme natural event such as a flood event can never be absolute. In practice, this means reliance on a hydrological model. It is widely recognised that even the best hydrological models are a mathematical simplification of complex natural processes that are subject to a number of unknowns. In chapter 3 we consider the reliability of the council’s hydrological model. We noted the comments of SEPA, who themselves have particular requirements placed upon them by the 2009 Act, including a general duty to reduce flood risk. We concluded that decisions on who to notify in fulfilling the requirement of paragraph 1(d) (ii) made in reliance on the council’s hydrological model was reasonable.

1.18 We note that in the committee report the council stated that properties within the 1:75 years flood envelope would be notified. It is accepted that parts of the Nunholm area would flood in a 1:75 years flood event. However, we consider that it is reasonable to conclude that the 1:75 years flood envelope relates to proximity to the delimited proposed scheme. On purely pragmatic grounds if nothing else, it seems reasonable that the comment in the committee report was not intended and did not commit the council to notify every property within, for example, the 1:75 years flood envelope for the whole of the River Nith catchment. In our opinion it should not have given rise to an expectation that such wider notification would occur (nor would require to occur in order to fulfil the requirement of paragraph 1(d) (ii)). In any event, as set out in Morton Fraser’s letter, some people in Nunholm did object to the proposed scheme. Our report considers these objections, including whether there would be any increase in flood risk to Nunholm (chapter 3) and whether the proposed scheme should be modified to include Nunholm (chapter 8).

1.19 We are unable to comment on what the courts would consider to be “substantial prejudice”. We would imagine that they would take into account the overall context surrounding the draft scheme, including the activities leading up to the notification of the scheme. In chapter 7 we consider community engagement. Whilst there were numerous

criticisms of the council's approach, there is no dispute that there were other consultation activities aside from the formal notification process. The council's claim that they have had correspondence with people in Nunholm (some who objected and some who did not), both before and after the formal notification process is entirely credible.

Adequacy of Environmental Information

Case for Nunholm Residents

1.20 The submitted ES is fundamentally flawed due to the following deficiencies:

- There is no acknowledgement of the predicted hydrological impacts of the scheme upon other areas (including Nunholm); no assessment of such impacts; no consideration of potential cumulative impacts and consequently no determination of the significance of such impacts.
- There is no acknowledgement of the proposed mitigation required to offset predicted hydrological impacts of the scheme, described as option LM1-4 ancillary works associated with the recommended scheme, CH-1: works within River Nith channel, removal of existing silt and vegetation from the River Nith on the east bank.
- Where option LM1-4 is considered within the ES, it is incorrectly described as a temporary short term impact with no requirement for continued maintenance to keep the channel clear of silt. Consequently there is no environmental impact assessment of LM1-4 as a permanent environmental change sustained by ongoing operations, and no environmental impact assessment of such ongoing operations.
- There is no consideration of the potential environmental impacts of the six alternative mitigation options presented in Appendix C of the Hydrological Modelling Report. Therefore there is no comparative assessment of the potential impacts of alternative mitigation options and their reliability and effectiveness and no consideration of such options in relation to the mitigation hierarchy.
- There is an insufficient baseline survey effort for otter and therefore an unreliable assessment of the impacts upon this species.
- In respect of option LM1-4, no baseline quantitative data has been provided to make an assessment of the predicted environmental impacts of removal of sediment to landfill as special waste, for either option LM1-4 or subsequent maintenance operations

1.21 As a result of these omissions the submitted ES cannot comply with Part 1: 2 and 4 and Part 2; 1 (c), 2, 3 and 4 of Schedule 2 of [The Flood Risk Management \(Flood Protection Schemes, Potentially Vulnerable Areas and Local Plan Districts\) \(Scotland\) Regulations 2010](#) (the 2010 regulations). As the submitted ES does not comply with the regulations it cannot be considered as an environmental statement. Neither the council nor the Scottish Ministers can confirm the flood protection scheme until a competent ES has been submitted.

Case for the Council

1.22 A comprehensive environmental impact assessment has been carried out covering the full range of prescribed topic areas and involving engagement with SNH, Scottish Water, HES and SEPA. It is not accepted that the ES is deficient in any of the matters alleged for the reasons set out in detail in the letter dated 3 September 2018. The ES complies with the whole of schedule 2 of the 2010 regulations and includes all the matters that can reasonably be required.

1.23 The scope and content of the ES was discussed with the relevant statutory consultees and they had the opportunity to formally comment. No concerns were expressed. In conclusion, the submitted ES is compliant with the 2010 regulations and there is no barrier to holding an examination or for Scottish Ministers to determine the scheme.

Others

1.24 Objection No 164 referred to an inadequate assessment in the ES regarding the impacts on businesses in the Whitesands area. Save Our Sands and objection No 332 also comment on the factual correctness, late availability of and lack of consultation on the ES.

Reporters' Comments

1.25 Although objectors other than Morton Fraser also refer to the inadequacy of the ES this is in the context of the costs and benefits of the scheme and the lack of engagement. It is not expressed in the form of any legal inadequacy.

1.26 The Flood Risk Management (Flood Protection Schemes, Potentially Vulnerable Areas and Local Plan Districts) (Scotland) Regulations 2010 (2010 Regulations) have been amended by revised regulations in May 2017. However, the transitional provisions state that the previous regulations apply to an ES that was prepared prior to May 2017 (as here). We therefore agree that the relevant requirements of the content of the ES for the Whitesands scheme are set out in Schedule 2 of the 2010 Regulations as they stood prior to 16 May 2017.

1.27 We would observe that the requirements set out in Schedule 2 are expressed in general terms. The overall objective is that a suitable ES is prepared identifying the likely significant effects, that this is subject to consultation and that both the council and ultimately Scottish Ministers consider all the environmental information (including the ES) before deciding upon the scheme. Although the 2010 regulations require Scottish Ministers to take into account the ES, the regulations do not bind Scottish Ministers in accepting any particular conclusions.

1.28 As a matter of fact, an ES, including various technical appendices and a non-technical summary has been prepared. The documentation was made available as required and SEPA, SNH, HES and Scottish Water were specifically consulted at various stages. We note that these organisations are familiar with environmental impact assessments and made no comments as to the competency of the submissions. We address the suitability of the survey work in chapter 5 and conclude that it is satisfactory.

1.29 In interpreting the provisions of Schedule 2, we would differentiate between the general scope and content required of an ES and any particular conclusions or findings such a statement reached. Any ES has to predict likely significant effects and it is commonplace for there to be numerous disagreements about the nature of such predictions. This does not mean that the ES is factually incorrect. The rest of our report addresses the various main disagreements that arose from all objectors, not just the Nunholm residents.

1.30 To agree with Morton Fraser's submission on behalf of Nunholm residents, Scottish Ministers would have to accept the premise that the proposed scheme does result in flooding elsewhere, that the full environmental effects have not been identified or considered and that the otter survey is inadequate. None of these allegations are accepted by the council. It appears to us that the essence of the comments made by Morton Fraser are actually a disagreement about the nature and extent of the predicted environmental effects rather than a deficiency in the scope of the submitted environmental information.

CHAPTER 2 Background and Context

River Nith System

2.1 The River Nith has a total catchment of approximately 1230 square kilometres (km) and a length of approximately 112 km. It starts in the Carsphairn Hills, South Ayrshire at an altitude of approximately 425 metres Above Ordnance Datum (AOD) and flows east towards Kirkconnel before flowing in a south easterly direction towards Dumfries. The river flows through the town of Dumfries before discharging into the Solway Estuary. The Caul (a man-made weir) in the centre of Dumfries is considered to be the upper tidal limit. The Cluden Water is a major tributary flowing into the River Nith. The confluence is located approximately 2.7 km upstream of Dumfries town centre. Within the town of Dumfries there are several bridges across the river. In the 1800's a riverside wall was constructed in order to control regular lower level flood events and high tides as well as to provide a port. The increased space was used for various communal events including regular livestock markets.

2.2 In the centre of Dumfries, the combined sewer system (i.e. both foul water and drainage water) has a connection with the River Nith through various outflows and overflows for highway drainage, two culverted water courses and the combined sewer network. In a flood event, the normal operation of this sewer and drainage network can be disrupted causing localised flooding. This flooding can be hard to detect because, as Scottish Water indicated in its hearing statement, it is believed that it is being masked by the more extensive flooding from the River Nith.

History of Flooding

2.3 Flooding from the River Nith and flood events in Dumfries have a long and well documented history, details of which are contained within the [Design Justification Report](#) (Annex C). Notable recorded flood events associated with the River Nith date back to December 1848 and include March 1881, October 1977, March 2007, November 2009, November 2011, January 2014 and December 2015.

2.4 The highest flood event that has been recorded by SEPA for the River Nith at Dumfries was Storm Frank in December 2015, this reached a peak height at the Whitesands' gauge of 8.251 metres AOD, with the highest flow rate of 752 cubic metres per second. This approximately equates to just under a 1 in 25 year return period event. It should be noted that it is likely more severe events occurred before detailed records were kept by SEPA.

2.5 Flooding of the Whitesands car park and nearby properties has been reported every year since 2003 and can therefore be regarded as an annual event. Whitesands is not the only area of Dumfries that can be liable to flooding. The Potentially Vulnerable Area defined by SEPA as Dumfries Nith extends north and south of Dumfries and covers an approximate area of 120 square km.

2.6 During Storm Frank, flooding occurred in parts of Nunholm. The road became impassable due to flood water and a number of properties were flooded. Some of the older houses with cellars also suffered flooding of their cellars. It is clear from the photographs submitted that other areas also suffered flooding.

Development of the Scheme

2.7 Over the years there have been many occasions when the relevant authorities have considered the matter of flood defences for Whitesands or Dumfries more generally. The previous Regional Council (then water authority) commissioned a report in 1988 from Babbie, Shaw and Morton ([Part 1](#) & [Part 2](#)). After considering the report it was ultimately decided not to progress any physical works but instead rely on other measures to manage flood risk.

2.8 In December 2006 Dumfries and Galloway Council commissioned Jacobs to develop a hydraulic model for the River Nith system ([Jacobs study 2007](#)). This relied on previous work undertaken by Jacobs. The purpose of this model was to understand the current conditions of the river system and then test and evaluate alternative options to understand the impacts. This report assessed five flood defence options and included recommendations. This original hydraulic model has been refined and revised as the scheme has developed. The consultant companies employed by the council have changed names due to amalgamations from Jacobs to Mouchel, which is now part of WSP.

2.9 In March 2010 Dumfries and Galloway Council commissioned Mouchel to review the 2007 model and associated report's recommendations. This review recommended various refinements of the model ([Mouchel Hydraulic Model Review Report 2010](#)). The revised model was used to evaluate a range of options. This resulted in a change of recommended approach ([Hydraulic Modelling report Mouchel 2012](#)). This was reported to the Planning, Housing and Environment Committee of the council in [December 2011](#). The committee's decision set the initial design parameters for the project.

2.10 Between December 2011 and December 2015 there were a variety of refinements and consultation processes undertaken which included:

- A "charrette" design process in 2012.
- Consideration of a self-raising barrier.
- Whitesands Masterplan supplementary guidance.
- Revisions to the height of the defences.

2.11 On [10 November 2015](#) the Economy, Environment and Infrastructure Committee of the council agreed the basis for the design work for a formal flood protection scheme. This work resulted in various refinements including the consideration of updated model information after calibration based on Storm Frank.

The Whitesands Project (Flood Protection Scheme and Public Realm Improvements) 2017

2.12 On [19 December 2016](#) the Economy, Environment and Infrastructure Committee gave approval for publishing the order. This decision was referred to the [full council on 29 December 2016](#), where the decision was confirmed.

2.13 The Whitesands Project (Flood Protection Scheme and Public Realm

Improvements) 2017 was duly published for formal comment. The [order](#) describes the scheme and includes a series of plans). It also includes a series of technical documents including an Environment Statement (ES). The key features of the scheme include:

- A raised walkway set on top of a grassed bund.
- A series of flood walls topped with glass panels.
- 460 metres of temporary demountable metal barriers designed to fix to the glass panels along Whitesands and other specific locations.
- 23 flood gates or flip up flood barriers.
- Alterations to the sewer system to mitigate sewer flooding.
- Removal of the vegetated berm at the easternmost arch of Devorgilla Bridge.

2.14 On 20 June 2017 the Economy, Environment and Infrastructure Committee considered the objections but made a preliminary decision to confirm the scheme without making any modifications. As is required by the relevant regulations, Scottish Ministers were informed of the decision. Scottish Ministers decided to call in the scheme and arrange for an inquiry to consider the objections and prepare a report for their consideration.

Inquiry Process

2.15 Upon appointment in March 2018 we wrote to every objector seeking confirmation as to how they wished their objection to be considered. We held a pre-inquiry meeting in Dumfries on 1 August 2018 to discuss and agree the arrangements for the inquiry process. The pre-inquiry meeting was webcast and the note of the meeting set out the choices available to objectors for their objection to be considered, these were as follows:

- Rely on the original objection
- Expand on the original objection by making further written submissions
- Presenting evidence at an inquiry session

2.16 In addition we requested that there should be two hearing sessions covering a) background and context for the Flood Protection Scheme and b) conditions and modifications. We invited SEPA, Scottish Water, SNH and HES to attend these two hearing sessions.

2.17 The inquiry sessions covered background and context, technical matters, visual and heritage impacts, impact on town centre (including tourism and parking) and community engagement. Participants were required to prepare in advance an inquiry statement (an outline of their case), documents and a precognition. All those who formally appeared at the inquiry are listed in Appendix 2 and the documentation before the inquiry is detailed within Appendix 5. The hearing and inquiry sessions took place in Dumfries between 6 November 2018 and 7 December 2018, with a one week break. All the hearing and inquiry sessions were webcast. Accompanied site inspections took place during the last week of the inquiry. Objectors who made further written representations or gave evidence at the

hearings or inquiry sessions were allowed to make written closing submissions, with Dumfries and Galloway Council having the final say. The closing submission process concluded on 28 January 2019.

Legislation

Flood Risk Management (Scotland) Act 2009

2.18 The Flood Risk Management (Scotland) Act 2009 (2009 Act) and the associated regulations, Flood Risk Management (Flood Protection Schemes, Potentially Vulnerable Areas and Local Plan Districts) (Scotland) Regulations 2010 (2010 Regulations) are intended to create a co-ordinated process to manage flood risk at a national and local level. The 2009 Act sets a framework for co-ordination and co-operation between organisations involved in flood risk management, particularly local authorities, SEPA and Scottish Water. Section 1 places a general duty on these organisations to exercise their flood risk related functions with a view to reducing overall flood risk.

2.19 Part 4 of the 2009 Act sets out local authority's functions in relation to flood risk management. They have a general power to manage flood risk, carry out repair works and make flood protection schemes. Section 60 and schedule 2 of the 2009 Act and the 2010 regulations set out the process and duties for preparing a flood protection scheme.

2.20 Section 65 of the 2009 Act states that in confirming an order, Scottish Ministers must direct that planning permission for any development shall be deemed to be granted planning permission, subject to such conditions that may be specified in the direction. Section 82 sets out a statutory entitlement to compensation for any person who sustains damages as a consequence of a local authority exercising its functions under the 2009 Act, including promoting a flood protection scheme.

2.21 Part 3 of the 2009 Act also creates a hierarchy of national, regional and local flood risk management plans and for SEPA to identify Potentially Vulnerable Areas. This is discussed further below.

Scheduled Monument and Listed Buildings

2.22 Devorgilla Bridge (also called Dumfries Old Bridge) is a scheduled monument and a category A listed building. Any direct works would require Scheduled Monument Consent and would require an application to be submitted to Historic Environment Scotland (HES) for consideration. As it currently stands, no application has been submitted.

The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended)

2.23 The [Water Environment \(Controlled Activities\) \(Scotland\) Regulations 2011 \(as amended\)](#) (often shortened to CAR) are intended to control activities which may affect the water environment. Under the proposed scheme, SEPA consider that three controlled activities have been identified that would require authorisation under CAR, along with one variation of an existing CAR licence. These are as follows:

- Complex licence for the floodwalls/embankment from the Caul to the upstream limit

- Complex licence for sediment management
- Licence for abstraction (level undetermined as yet) for pumping of water from Lore Burn to the River Nith during flood events
- Variation of Scottish Water sewer network licence to cover changes to the sewer overflows/pumping stations in the Whitesands area

Nature Conservation

2.24 The proposed scheme does not lie within or adjacent to any designated sites of ecological conservation interest. However, the Solway Firth Special Area of Conservation is approximately 5 kilometres downstream, where Sea and River Lamprey are qualifying species. It is our understanding that Scottish Ministers would be the competent authority in determining the proposed scheme and therefore would have to consider whether the proposal would give rise to likely significant effects on Sea and River Lamprey.

2.25 In addition, the ES identified the potential presence of protected species including otters, bats, nesting birds and salmonids and other fish. The presence of protected species is likely to be a material consideration, in particular, whether a licence would be needed for any potential disturbance and if so, the prospect of a licence being granted. The grant of deemed planning permission would not provide an exemption for an activity that would otherwise be an offence.

Scottish Water

2.26 Scottish Water is a statutory body established under Section 20 of the Water Industry (Scotland) Act 2002 with duties to provide water and sewerage services throughout Scotland. These duties are contained in the Water (Scotland) Act 1980 and the Sewerage (Scotland) Act 1968. Scottish Water also has a duty under the 2009 Act to reduce overall flood risk.

2.27 The proposed scheme would alter some of Scottish Water's existing assets. Once the work to these assets had been completed they would be adopted by Scottish Water and thereafter maintained by them as is normal practice. The sewers, pumping stations and associated equipment required by the proposed scheme would have to comply with the relevant legislation, regulations and recognised standards.

Policy Guidance

Flooding

2.28 The Scottish Government aims to reduce flood risk. As set out above, the 2009 Act is a mechanism for achieving this objective. The [Flood Risk Management Strategy – Solway](#) was prepared by SEPA and approved by Scottish Ministers, Dumfries is included within the Dumfries Nith Potentially Vulnerable Area (see pages 66 – 78). Action ID 140060006 recommends the progress of a flood protection scheme for Whitesands. It is indicated as 18 out of 42 in terms of national priority and 1 out of 4 for Dumfries and Galloway.

2.29 The [Solway Local Flood Risk Management Plan](#) was published in June 2016 by Dumfries and Galloway Council and agreed by SEPA. The actions for Dumfries Nith are set out in pages 65-80, these include a flood protection scheme for the Whitesands area.

Planning and Heritage

2.30 [Scottish Planning Policy](#) (SPP) sets out the Scottish Government's planning policy. This includes impacts on nature conservation and heritage. In relation to flooding, SPP includes a risk framework to guide development. In summary:

- Little or no risk – annual probability of less than 0.1% (1:1000 years)
- Low to medium risk – annual probability of between 0.1% - 0.5% (1:1000 – 1:200 years)
- Medium to high risk – annual probability greater than 0.5% (less than 1:200 years)

2.31 The development plan currently consists of the [Dumfries and Galloway Local Development Plan](#) adopted in 2014 and any adopted supplementary guidance. The local development plan has a range of policies relating to specific issues including flooding and to particular spatial areas such as Dumfries Town Centre. Adopted supplementary guidance includes the [Whitesands Masterplan](#). The current local development plan will be replaced by Dumfries and Galloway Local Development Plan 2. The new local development plan has completed its examination and is hoped to be formally adopted in September 2019.

2.32 At the time of the inquiry, policy guidance published by HES in relation to scheduled monuments and listed buildings was contained in [Historic Environment Policy Statement](#). In April 2019, this was replaced by Historic Environment Policy for Scotland. However, although written in a different style, the new document does not represent any change in policy objectives.

SEPA Guidance

2.33 In undertaking its regulatory activities, such as CAR licensing, SEPA relies on various internal policy and guidance notes. These are set out in the list of SEPA documents in Appendix 5.

Terminology

2.34 Throughout the evidence presented to us, flooding and rainfall events were often expressed in return periods. For example, the proposed scheme has been designed to provide a 1 in 75 years standard of protection. This is a common form of expression.

2.35 However, it is important that the meaning of this expression is understood. Our understanding is that, for example, a 1 in 75 years flood event means an annual probability of such an event occurring of 1.34% (or 98.66% chance of it not occurring). Averaged out over a very long period of time, there is a good chance that such an event would occur at least once every 75 years. However, this does not mean such an event will only occur once every 75 years. Any given community could be statistically “lucky” and never experience

a 1 in 75 years event. Conversely, a community could be statistically “unlucky” and experience any number of such events in a year.

2.36 We also consider it important to differentiate the hazards of a particular flood event (i.e. the damage caused) and the risk of it occurring (i.e. a 1 in 75 years event or an annual probability of 1.34%). The actual damage caused would be a function of many factors including flood depth, water flow rate and nature of debris carried etc.

CHAPTER 3 Technical Matters

3.1 At the pre-inquiry meeting it was agreed that the topic of technical matters would be addressed at the inquiry and that this would include the following matters: design modelling, option choice, cost/benefits, impacts up and downstream, design robustness, maintenance and health and safety and water drainage infrastructure.

3.2 Chapter 4 of the ES deals with natural flood management and consideration of alternatives. Chapter 10 addresses the impacts of the scheme on the water environment including water quality, hydrology (flooding) and hydromorphology (effects on the shape of the river bed). The ES is supplemented by a number of technical reports listed at Appendix 1 of the council's [Inquiry Statement on Technical Matters](#). The most significant of these being the [Hydraulic Modelling Report](#) by Mouchel January 2017. The [Design Justification Report](#) considers the effectiveness and technical feasibility of a number of flood protection options and sets out the technical, environmental and economic justification for the scheme. Annex L of the council's submissions, the [Economic Appraisal Technical Note](#) contains the detailed appraisal to demonstrate the economic viability of the scheme. The glossary of terms at Annex 2 of [Delivering Sustainable Flood Risk Management Guidance](#), Scottish Government 2011 provides a helpful reference in relation to technical matters.

3.3 The position of [Scottish Water](#) and [SEPA](#) are set out in their hearing statements and in the consultation responses within [Annex G](#) of the council's submitted documents.

Save Our Sands

3.4 The position is set out in the original objections from the group and John Dowson contained within Annex G of the council's submissions, the [inquiry statement](#) and [closing submission](#) and also in the precognitions of [Mr John Dowson](#), [Oliver Femont](#) and [Mr Marchant](#) who participated on behalf of the group.

Standard of Protection

3.5 The design chosen is not the best option for Dumfries. It shows little understanding of the Whitesands as a historical beach and flood plain. There is no technical or environmental justification for a scheme designed to a 1 in 75 years standard of protection. This is an arbitrary figure based on availability of grant funding. A more modest scheme, perhaps one in ten years level of protection, would deal with 90% of the flooding at Whitesands. A low solid wall, providing approximately 1 in 10 years protection, would cut out 90% of floods. The public have expressed a desire for a barrier of this scale. As there is no consensus for the council's preferred scheme the do-nothing approach, pending further analysis and consultation, is the preferred outcome.

3.6 The scheme would fail to prevent flooding at Whitesands from events of greater than a 1 in 75 years return period and even with the scheme the Greensands area would still flood. The area would remain classed as a flood plain by SEPA and therefore development would still only be permitted in exceptional circumstances. The insurance industry would continue to deny insurance policies for flooding in this area.

Modelling

3.7 The model of the hydraulic impacts is only an estimate and it has already been recalibrated. There cannot be confidence in the reduction in height of the proposed barrier from 3.36 metres to 2.9 metres following recalibration of the modelling as this has not been fully explained.

3.8 It is unacceptable that the proposal makes no allowance for climate change even though the various reports consider that this will be a factor within the 100 years lifespan of the scheme. Without an allowance for this the scheme only offers a 1 in 20 years level of protection. The scheme cannot be easily adapted to meet any future requirements. Although below ground structural elements have been designed to allow for an increased height of the barrier climate change has effectively been designed out of the proposed scheme as a higher barrier was considered unacceptable. The scheme should therefore not be approved.

Impacts Up and Downstream

3.9 The design justification report refers to the potential 50 mm rise in flood levels at Nunholm. Any scheme that caused upstream flooding would be a breach of the conditions for Scottish Government grant funding and contrary to the agreement reached by Dumfries and Galloway councillors. There has been no consideration of impacts on Kingholm Quay. It has not been proven that the proposed removal of sediment at Devorgilla Bridge would mitigate the rise in water levels at Nunholm. The scheme should not be approved until a flood defence scheme has been installed at Nunholm.

3.10 The scheme would increase water velocity in high return events, this would put the Devorgilla Bridge at risk. The council has not been able to guarantee the safety of the bridge and this has not been adequately considered.

3.11 Mouchel indicated that the existing riverside wall cannot be relied upon for the entire design life of the scheme unless remedial works are undertaken and that major repairs may be required which would represent a significant challenge. As the proposed scheme is designed to have a 100 years lifespan and relies on the integrity of the river walls these should be assessed and repaired first. It is requested that if the scheme is confirmed that it be on the condition that remedial works are undertaken to ensure the stability of these walls for a 100 years period.

3.12 Seepage of groundwater has not been fully explored as no detailed ground investigations have been undertaken. This may pose a flooding risk particularly if it is prevented from discharging to the river and has potential implications for the category A listed building at Whitesands.

3.13 Ongoing operation and maintenance of the scheme are likely to be unworkable, costly, ineffective and potentially dangerous, particularly given the council's past record on such matters. There is no evidence that the financial and staff resources would be available to deploy the defences and to maintain them in the long term. There is no engineering evidence that the system would work and only one of the demountable panels needs to falter for the scheme to fail.

Option Consideration

3.14 Design options have not been fully appraised taking account of both the costs and benefits through a robust option appraisal process. The council has pursued one option and has not compared the options on a fair, effective and equitable basis. Inadequate financial information was provided to councillors and the public to allow a full and proper comparison of options. Potential for upstream storage has not been fully explored. The self-rising barrier option is preferable and requires less human intervention but despite being acknowledged as viable it has been unfairly discounted. The specification used in the council's consideration of this option was for a 1.1 kilometres length of barrier, however only 450 metres would be required as a replacement for the proposed bund. The rising wall option was designed and costed without input from specialist providers of that product, the option appraisal process should be redone. The cheapest option is not necessarily the best. The present scheme is being pursued in order to achieve the 80% Scottish Government grant funding.

Cost-Benefit Analysis

3.15 The figures used in the cost benefit analysis are disputed. Dr Chatterton was given the figure of £25 million as the cost of the project, however, the previous calculations used a figure of around £29 million as this included maintenance costs. The figures used are from December 2016 and are out-dated, the cost of the scheme is more likely to be around £35 to £40 million. The operational and maintenance costs have been significantly underestimated and compensation payments have not been included. The capital cost of the works required to the river wall should be built into the cost benefit analysis. The use of a 1 in 200 years flood model and a 1 in 75 years level of protection optimises the calculations in the council's favour.

3.16 The analysis has been undertaken using the 'multi-coloured handbook', this is not relevant to circumstances in Dumfries. The number of properties that the calculations are based on is questioned and the council has failed to identify these. There are very few residential properties affected by frequent floods, most residential properties are on upper floors. The annual estimate of damage from flooding at Whitesands is inaccurate and over-estimated, it is more likely to be around £50,000. The present value of damages stated as £13,227,118 in table 2.3 of the Economic Appraisal Technical Note has no credible source. There is no basis for the present value of benefits stated as £87,487,459 in table 2.5.

3.17 The use of the "Monte Carlo" figure of 16% is not industry standard. If the standard 30% optimism bias is applied the costs and benefits are almost equal. It is likely that recalculating using more accurate costs would result in failure to meet the 1:1 cost benefit ratio, even if the 16% "Monte Carlo" system is applied. The economic benefits of the scheme would therefore not be greater than its costs. Allowing for climate change would result in the scheme only offering a 1 in 20 years standard of protection and would also result in the scheme failing to meet the 1:1 cost benefit ratio. A full and independently audited analysis of the cost benefit calculations should be undertaken and published.

Design Robustness/Maintenance

3.18 If overtopped the barrier would trap flood water in the town and potentially for some time; at present flood water drains away quickly. There is no confidence that the flood water release mechanisms would be maintained.

3.19 There are insufficient details available of the proposed scheme including the demountable barriers, glass walls and access openings, it therefore not possible to assess their effectiveness. No analysis of the robustness of the proposed structure has been undertaken.

3.20 The design of the raised walkway and access from Devorgilla Bridge to the east are unsafe, especially for those in wheelchairs.

Water Drainage Infrastructure

3.21 The scheme lacks detail, particularly in relation to the drainage works. Scottish Water has not committed any capital resources to the costs of construction and maintenance of the pumping stations and drainage works that are proposed as part of the scheme. There is no evidence that it has budgeted for the drainage works required as part of the scheme. Scottish Water's role in the scheme requires to be clarified. The £3 million cost of the drainage works stated by the council is under estimated and does not compare with the figure contained in the 1988 Babbie Report.

3.22 The surface water storage provision has been designed for only a 1 in 30 years event, the scheme should not be approved unless provision is made for a 1 in 75 years event.

Mr Marchant

3.23 Mr Marchant from "M3Floodtec" presented evidence as a specialist on self-raising flood barriers on behalf of Save Our Sands. His area of expertise related in particular to the Self Activated Flood Barrier (SAFB) scheme invented by his business partner Mr Frank Kelly.

3.24 The self-raising barrier system is a non-mechanical, self-activated system that has been in use in many countries across the world for more than six years. These barriers have been called into operation on many occasions and have not failed. Standard barriers are designed to protect to a maximum of 2.5 metres above ground level. Heights of 3.5 metres are possible where a 0.9 metres wall is incorporated. Although initial costs are higher the system is cost beneficial against other more conventional flood defence solutions as it is virtually maintenance free. It can be designed to cover a number of parameters including continuous protection for an indefinite length, its activation requires no human or mechanical intervention, and it self-drains and self-cleans. This low maintenance system has minimal impact on the environment in terms of low carbon footprint and visual appearance.

Oliver Femont

3.25 Mr Femont also presented evidence as a specialist on self-raising flood barriers on behalf of Save Our Sands. He is an associate director of "Aggeres Flood Solutions" who has obtained the exclusive rights for the "SCFB" flood defence system in the Benelux region and non-exclusive worldwide license from the patent holder.

3.26 The Aggeres self-rising barrier system is the only fully autonomous flood defence system. It is accredited by the Dutch government for use in the Dutch primary dyke system.

A barrier can be implemented of practically unlimited length. It is more reliable and has less risk of failure than a demountable system. For a straight barrier vertical supports are only essential at either extremity of the barrier.

Oliver Mundell MSP

3.27 Details are provided in the original objection letter (No 297), [inquiry statement](#) and [precognition](#). The calculations relating to up and down stream impacts do not appear to have been verified by third parties.

3.28 The scheme is unfit for purpose and is too expensive. Dumfries experiences regular flooding but most is relatively minor. The council has rushed ahead with a single design, other less intrusive systems have not been properly looked at and should be considered.

3.29 The costs of the proposed scheme have increased considerably since first proposed. The scheme would require a significant amount of maintenance and manpower in terms of its visual appearance and effectiveness. The ability of the council to adequately maintain the scheme is questioned.

Alistair Moir (Objector No 186)

3.30 Details are provided in the objection letter, [precognition](#), [inquiry statement](#) and [closing submission](#). Insufficient research has been undertaken to define the causes of and problems resulting in flooding at Whitesands during periods of high inflow. The figures used to justify the scheme have been taken from a year of minimum inflow and maximum outflow, making them invalid as comparator years.

3.31 From 1939 to date flood plains have been reduced by upstream local agricultural land protection resulting in raised water levels at Whitesands. Breaching of the riverside bund at Dalscone in the 2015 flood considerably reduced flooding levels at Whitesands. Flood plain restoration and management may be a better solution than the proposed scheme. The councils' technical evidence was contradictory, two sumps or reservoirs were considered while the use of flood plains to regulate and slow river flows was discounted. The council also conceded that the flooding of the Dalscone flood plain led to reduced water levels at Whitesands. Measures to reduce flow rates are what is required to address the Whitesands flooding.

3.32 The design is fundamentally flawed. The structure would be situated upon a base of shifting sand and would not withstand movement imposed by the flood water. Breach of the scheme would have catastrophic impacts on the downstream area. The scheme should be rejected and further research be undertaken.

Morag MacDonald (Objector No 185)

3.33 Details are provided in the letter of objection, [inquiry statement](#), [precognition](#) and the [closing submission](#). Although concerns expressed relate predominantly to community engagement, some points are noted in relation to technical matters. The scheme would result in a 50 millimetres increase in flooding upstream but the plans to off-set this are not to the satisfaction of residents at Nunholm. The scheme would also increase water speeds and may have implications for increased flooding downstream, such as at Kingholm Quay.

3.34 The council has consistently promoted the earthen bund approach and has not meaningfully explored the self-rising barrier option. The presentation of other options was biased and misleading. The estimated cost was a key argument for rejection of the self-raising barrier option however the costs of that option are now comparable with the costs of the proposed scheme.

John White (Objector No 258)

3.35 Details are provided in the objection letter, [inquiry statement](#) and [closing submission](#) dated 3 January 2019. Whitesands has flooded historically; the scheme would not provide a satisfactory solution. The same objective can be achieved with considerably less expenditure, other options should be investigated including the self-rising wall. If including the additional 20% climate change allowance recommended by SEPA the scheme currently proposed would require to be 3.6 metres in height. If the allowance of 45% recommended elsewhere was incorporated the resultant height of the current scheme would be 4.3 metres. The rising wall would not be more expensive than the proposed scheme. That option should have been investigated more thoroughly.

D Miller (Objector No 328)

3.36 Details are contained within the objection letter, hearing statements for [6 November](#) and [7 December](#) 2018 and [closing submission](#) dated 11 January 2019. The current scheme is based on an unwarranted aversion to upstream measures. The dependence on direct measures at Whitesands is motivated by economic and political rather than hydrological factors. The rejection of upstream measures is inconsistent with earlier reports and has resulted in a more intrusive and costly scheme at Whitesands. The first report from consultants appointed to investigate and propose flood protection at Whitesands (Babtie 1988) recommended a combination of upstream measures and a modest 1 metre high raised walkway at Whitesands. Upstream measures were dropped as it had been believed that the embankments at Dalscone were protected. In the report by Jacobs in 2007, which considered various proposals, the preferred approach was upstream measures along with a scheme of embankments and demountable panels at Whitesands. The combination of measures would have provided protection up to a 1 in 200 years event at Whitesands. There is a contrast between the reasons given by consultants for rejecting upstream measures and those presented to councillors. There is no evidence of consultation with land owners regarding upstream measures. These matters should be investigated before a final decision is reached on the scheme.

3.37 The present scheme does not include a comprehensive drainage assessment. There is no overview of the existing drainage network and its condition, what works are required, their costs and who would pay for them. The two underground watercourses, the Loreburn and the Millburn, intersect with the sewerage and drainage systems and influence rates of flooding. The routes of these watercourses their capacity and outflows are poorly understood and have not been fully assessed. A further culverted watercourse, the Gutter of Calsey, has been omitted from the reports. This watercourse may have implications for the proposed scheme as it contributes to the flooding in the vicinity of Bank Street, a location where it is possibly the deepest. There are also a number of old wells which may have an influence on drainage and flooding.

Morton Fraser

3.38 The position of Morton Fraser, acting on behalf of residents at Nunholm, on technical matters is set out in their written submissions dated [7 September 2018](#) and closing submission dated [11 January 2019](#).

3.39 The council's efforts to find a solution to the problem of flooding at the Whitesands and other areas of Dumfries are supported. There is no opposition in principle to a flood protection scheme at Whitesands. The objection to the scheme currently proposed is a result of the serious concerns that it would have an adverse effect on the properties and residents at Nunholm.

Modelling

3.40 The detailed hydrological assessment does not form a reliable baseline upon which to make an assessment of the impacts of the scheme as questions on a number of issues remain unanswered. The [letter from SEPA dated 13 March 2017](#) contains points that are unsubstantiated or have been contradicted elsewhere. It omits a number of matters such as SEPA policy or best practice guidelines, climate change, future maintenance of the scheme and the previously refused CAR Licence application.

3.41 Modelling should have been undertaken to demonstrate how the scheme can be adapted to deal with a range of climate change scenarios. There are grave doubts that the scheme is able to be adapted to cope with climate change increases of up to 20%, which was the recommended allowance in SEPA guidance at the time the scheme was developed. The evidence of Tim Jolley indicated that a 40% allowance is the current SEPA guidance for this part of Scotland. The council's own guidance on flood risk assessment, SPP and the 2010 Regulations all emphasise the need to take account of the effects of climate change. Without such future proofing the scheme is imprudent and exclusion of climate change gives a gross exaggeration of the flood protection benefits of the scheme.

Impacts Up and Downstream

3.42 There are a number of omissions from the various technical reports, these are listed at paragraph 122 of the further written submissions of 7 September 2018. The hydrological modelling and assessment has underestimated the increase in flood water levels that would occur at Nunholm as a result of the scheme.

3.43 No site specific detailed flood risk assessment has been undertaken in relation to the impacts on Nunholm. The assessments undertaken do not take into account factors such as sensitivity of receptors, safe means of access, the effects of climate change or that some properties have basements at which are presently affected by flooding. The modelling undertaken shows an increase in flood water level at Nunholm of approximately 0.06 to 0.07 metres at a 1 in 75 years event. Flood levels at Nunholm for other return periods have not been provided. An increase in flood levels of even a few centimetres may trigger the flooding at the low point and electricity substation at Nunholm Road. This location is very sensitive to flooding from approximately 1 in 20 years events and frequently floods to a depth that results in loss of power and prevents vehicular and pedestrian access to about forty residences and two businesses. Such flooding often takes place in the winter and spring and has serious consequences for residents, particularly those who are vulnerable.

3.44 SEPA has stated that predicted increased water levels at Nunholm are unlikely to represent a materially significant increase in flood risk relative to the existing situation. There is no evidence of any assessment process to support this statement or to support SEPA's comments rejecting local flood defences at Nunholm. The more recent comment in the hearing statement from SEPA that the predicted increase in flood water levels at Nunholm could be within general model tolerances is questionable. It is accepted that the model is the best available evidence, however, it clearly shows a predicted displacement of flood water at Nunholm. Taking a precautionary approach, as set out in SPP and elsewhere, the predicted increase cannot be dismissed merely as an overestimation or a lack of finesse in the modelling. If such doubts over the reliability of the modelling are accepted then it cannot be relied on as evidence to demonstrate that the mitigation proposed is likely to be effective. At the initial hearing session SEPA commented that indirect methods of flood defence such as natural flood management and in channel works are without credible, tangible, empirical evidence to back up their validity as a wholesale replacement for a hard defence scheme. This lends weight to the case for a local flood defence scheme at Nunholm.

3.45 The scheme and mitigation proposed do not allow for future increases in flood water levels as a consequence of climate change. No data is provided that includes an allowance added to the predicted baseline increased flood water levels at Nunholm. Allowing for climate change a 1 in 75 years flood would occur more frequently. It is not possible to have confidence that the mitigation would be effective when climate change is taken into account. SEPA and the council stated at the Inquiry that the council are not legally required to make an allowance for the predicted effects of climate change in the design of the scheme. Nevertheless paragraph 255 of SPP and the 2010 Regulations both indicate that account should be taken of climate change.

3.46 Displacement of flood water to sensitive residential areas is unacceptable and not in accordance with the Ministers' duty to reduce overall risk of flooding in accordance with Section 1 of the 2009 Act and SPP.

Design Robustness/Maintenance

3.47 The [Hydro-morphology Assessment](#) (Annexe U) shows that the river system is highly mobile and unpredictable. It indicates that fresh sediment from the Cluden Water would be deposited downstream, particularly where the sediment removal is proposed at Devorgilla Bridge. Once removed, sediment would continue to be deposited and it is envisaged that it would need to be removed every few years. The council's assertion that the removal of vegetation would reduce the accumulation of sediment is disputed. As set out in the hydro-morphology report and in accordance with principles of river morphology, sediment would naturally accumulate on the inside bend of the meander and would create an area where vegetation can establish. A high rate of deposition can take place during a flood and even with the best of intent the channel cannot be kept clear of sediment at all times. These issues cannot be engineered out of the mitigation method proposed. The long term effectiveness of the mitigation is therefore questionable. There is no identified 'trigger level' when maintenance would be required and there are no proposals to monitor this. No witnesses were brought forward to answer questions relating to sediment movement. The matters identified in Appendix D of Mouchel's study concludes that Option 2C/LM1-4 (the proposed scheme and mitigation at Devorgilla Bridge) requires further consideration of erosion, deposition and fluvial geomorphology, maintenance, construction method and

environmental consents. This additional work has not been undertaken. The council's conclusions on sediment removal are therefore unsubstantiated.

3.48 Nothing has been included for the repetition of the £636,000 cost for sediment removal which is likely to be around £16 million over the lifespan of the scheme, not allowing for climate change. As there is no budget commitment or detailed proposals in respect of these works, it is questionable if it can be delivered or maintained. There is nothing to compel the council to undertake this mitigation and no commitment has been made to do so. Future sediment removal is also likely to be reactive and as it would accumulate again from the time that it is removed the effectiveness of the mitigation would incrementally decrease from that point in time. For ecological reasons such work would also be subject to seasonal constraints and would be contingent upon separate statutory consents which might not be granted. The mitigation proposed would not provide value for money or constitute permanent mitigation that would eliminate the risk to Nunholm. It is not sustainable and any benefits do not justify the environmental cost. The mitigation does not meet the criteria for flood protection works under Section 18 (1) (b) (ii) of the 2009 Act. Local flood defences would be a viable and more suitable form of mitigation.

Option Consideration

3.49 The alternative mitigation options were compared only in terms of hydrological issues, no account was taken of other matters such as flood protection benefits, costs, reliability, maintenance requirements and environmental impact. In balancing the costs and benefits of the scheme the Ministers should have regard to whether there are viable alternatives to the scheme.

3.50 There is no evidence to support the claim that local flood defences at Nunholm are not feasible on the grounds of cost or land ownership. The council has compulsory purchase powers available under the 2009 Act to acquire the land required to implement local flood defences.

3.51 Heightened flood banks upstream to protect agricultural land from flooding have reduced attenuation and storage leading to increased peak flows downstream. Such banks are in place all along the Nith except at Nunholm which is consequently vulnerable to flooding.

3.52 The Nunholm area is at the same level of flood risk as Whitesands for river flooding and is included in the same SEPA flood risk zone. This area contains residential properties and several successful businesses including the Casa Mia restaurant and Dumfries Sports Club. The public benefits from the scheme do not outweigh the disruption to Nunholm. The local flood defences option set out in the report '[Devorgilla Bridge- Additional River Measures Technical Note](#)', Mouchel 2014 should be included in the scheme; these would avoid the adverse impacts at Nunholm. If this is included then the objection from the residents at Nunholm would be withdrawn.

3.53 In its current form the proposed scheme would not be in compliance with the Scottish Ministers' duties under Section 1 of the 2009 Act. The scheme prioritises commercial properties over vulnerable residential areas. The majority of the properties at Whitesands are resilient to or not sensitive to flooding either by design or by the character of land use.

3.54 It is requested that the scheme not be confirmed unless the Ministers are satisfied that there would be no adverse impact on Nunholm and that any mitigation is robust, effective and permanent. Without modification the Scheme does not meet the requirements of Sections 1 (2) (b), (c) (i), (ii) and (iv) of the 2009 Act.

Written submissions from objectors

3.55 Many of the written objections advanced similar arguments to those parties who were heard orally, those individual objections are therefore not summarised separately. The majority raised the following issues:

- The technical documentation is too complex to be able to be understood by and commented on by the public.
- The UK Government recommends resilience, not flood control.
- The scheme is disproportionate to tackle the scale and short lived nature of the flooding that occurs at Whitesands, the nature of the area and number of properties affected.
- The people of Dumfries would be content with a scheme that protected them from regular flooding and would accept the risk from exceptional flooding.
- Flood protection should not just be provided for this part of Dumfries.
- The cost is excessive, unaffordable and is not justified by the benefits. The costs of the project have increased over time and the scheme is likely to be more expensive than stated.
- A less expensive, more modest scheme, should be pursued.
- The scheme would not stop all flooding, insurance companies and SEPA would still consider Whitesands as a flood risk area.
- There is no guarantee that the scheme would work.
- It is not certain that the mitigation would work and would continue to be undertaken in the long term.
- Alternative options have not been fairly and properly considered and full details of costings for other schemes have not been made available.
- Alternative, cheaper options or combinations of measures are more appropriate. A wall or self-rising barrier should be considered, these have been used successfully elsewhere. Dredging, the removal of gravel and use of upstream floodplains have all worked here in the past and such measures have proven to be successful elsewhere.
- The barrier should be set back and the car park and road should be allowed to flood.

- Concern over adverse up and downstream impacts and whether the water would be pushed to the opposite side of the river.
- Lack of confidence in the robustness of the scheme; the force of the water would eventually destroy the bund and damage the glass panels. Similar schemes elsewhere have failed and suffered damage. Failure of one panel would have catastrophic consequences. Concern over the consequences of flooding during construction.
- The area has flooded since time immemorial and should be allowed to flood.
- Concern that the demountable panels would not be deployed in time.
- If the barrier is overtopped flood water would take longer to clear than at present.
- The area allowed to flood or affected by any overtopping of the barrier may be affected by sediment that is contaminated or contains invasive, non-native species. Removal of this material may face hurdles as has been experienced at the Sandy Opening. This may also pose a threat to public health through the spread of e-coli, cholera or hepatitis.
- Lack of confidence that the scheme would resolve flooding from the drainage infrastructure and underground watercourses and there is no commitment from Scottish Water to the expenditure required.
- Concern regarding the cost of the future maintenance of the scheme and the council's ability to carry this out.
- Why are flood barriers proposed at four properties at Kenmure Terrace when those houses there have apparently not flooded before.
- The design of the scheme would reduce visibility of the river and the adjacent walkway, this would result in anti-social behaviour, reduce public safety and lead to difficulties in accessing the river in emergency situations.

3.56 The following objectors raised additional detailed points:

Mr & Mrs Carruthers (Objectors No 165 & 166) It is unclear whether the underground streams have been taken into account. These cause flooding before the river overflows.

W. Clark (No 207) The flood water should be taken out of the river upstream, by the time the flood water in the Nith gets to the most upstream bridge on the bye-pass it is too late to do anything about it. An upstream barrage with water gates should be built, excess water could then be conducted in a concrete lined channel and discharged to the sea.

R. Chorlton (No 17) The design of the scheme would prevent access to large parts of Whitesands during flooding. The scheme should be to maximise access whether or not there is a flood.

C. Douglas (No 82) Removal of the Caul would address flooding at Whitesands. No flooding occurred in the few years period that it was breached in the 1960s.

Frank Dunbar (No 47) Details are contained both in the original objection and [further written submissions](#). Questions whether the scheme is justified, whether the economic appraisal was even-handed in terms of consideration to other options and whether the figures used are realistic. The multi coloured manual may not be directly comparable to Whitesands. Most flooding is relatively minor, the cost of current post flooding clear ups is probably less than the maintenance costs of the proposed scheme. There is no distinction between the estimated damage costs for commercial and public properties. Scarce public money should not be spent to benefit mainly private and mostly commercial owners who would have paid lower prices than normal for their properties.

John Fergusson (No 282) Details are contained both in the original objection and [further written submissions](#). The damage from flooding has been grossly exaggerated, most floods are minor, affect a limited area, only cause slight inconvenience and dissipate quickly.

B. Graham (No 204) There is an assumption that the works would not exacerbate scouring of the bridges, presumably the cost of inspections and additional protection are included in the costings. Questions whether the models included an allowance for the spring tide factor.

G. Hodge (No 290) The professional indemnity insurance of Mouchel is inadequate given the potential consequences of their input being found to be defective.

D. J. Irving (No 150) Modifying the Caul would have some benefits as it is presently angled in such a way that it directs the river towards the bank at the Whitesands and creates eddies that prevent smooth flow of water downstream. Computer modelling is useful but is only as good as the information and data used.

Mr & Mrs Johnstone (Nos 247 & 248) There is proof that the river bed has risen at least 2 to 3 feet over the past 50 years and is continually rising. Dredging should therefore be the first option to be tried.

John Kennedy (No 330) Details are provided in the original objection and the [closing submission](#). The option appraisal has not been undertaken in accordance with Scottish Government guidance which requires consideration of all available options and the costs and benefits on the community as a whole. There is no consideration of the beneficial effects of other options on other parts of Dumfries, they are only considered in relation to Whitesands. Upstream measures would have a greater influence on areas beyond the tidal reach such as Nunholm. The effects of climate change should be fully explored before committing to an expensive project that may prove ineffective. In order to claim that the scheme would not have a negative effect on Nunholm the council is reliant on unknown and undefined mitigation works that may not be legally permissible under legislation relating to European Protected Species. SEPA's standing advice on sediment removal and flood risk is that it is a temporary measure and is therefore not normally a sustainable method of flood prevention. To put adverse impacts on Nunholm beyond reasonable doubt the council should extend flood protection measures to that location.

Tom McCartney (No 3) Details are provided in the original objection, [further written submission](#) and the [closing submission](#). The Mouchel report focuses mainly on a 1 in 75 years event, it does not adequately indicate how the scheme would affect Nunholm in a 1

in 25 years event and whether the mitigation would be adequate for such an event. Councillors have been misled about the impacts on Nunholm.

E. Pollock (No 190) Careful consideration should be given to the sustainability of the scheme, it should be tidy, easy on the eye and easy and cheap to maintain. A maintenance regime is required to ensure that sediment does not build up and increase upstream water levels. No data is available regarding the consequences of not regularly removing any build-up of sediment. In dealing with such a complex process there may be inaccuracies or misinterpretation; conclusions made therefore cannot absolutely be relied upon. SEPA's comments in respect of the modelling cannot be relied upon as the advice is caveated in relation to possible inaccuracies and completeness of the information supplied to them by the council and its consultants. Even a well-protected property at Nunholm might flood as a result of the scheme if there are any inaccuracies in the data used to make the predictions regarding water levels or if the removal of sediment at Devorgilla Bridge is not maintained for the lifetime of the scheme. The council's commitment to sediment removal cannot be guaranteed as in evidence it has stated that the effects of the mitigation would not be substantial.

Stuart McDonald (No 244) Details are provided in the original objection and [further written submission](#). The exact location and nature of the termination of the flood defences in the vicinity of the properties at Dock Park are unclear. The scheme may alter the current of the river at this location and fast flowing water may undermine the existing retaining wall and banking below the properties at Grant Court.

E. McEwan (No 303) the Mouchel study is insufficient, all relevant areas have not been included and the solutions are contrary to fundamental recommendations made by hydrologists. The Nith floods over vast areas from Auldgirth to Whitesands, it is unrealistic to think that removal of sediment at Devorgilla Bridge would save all upstream areas from flooding. Proof of the impacts of the scheme will only be known when it is too late.

Mr & Mrs McIlwraith (Nos 260 & 261) Details are provided in the original objection and [further written submission](#). Evidence shows that the council is struggling to meet its current maintenance commitments and it has openly stated that further financial cuts will mean that certain facilities and services will no longer be sustainable. Although the council may have a legal obligation to maintain the integrity of the barrier diminishing council budgets are likely to cause the council to be unable to maintain the scheme in a clean and attractive condition that would draw visitors. The riverside of the barrier would be allowed to flood, how would the council keep this clean and deal with contaminated silt that would be trapped along that area?

P. Coles (No 151) There is no evidence that the recent flooding in 2009, 2011 and 2015 reached the same levels as the flooding in 1962 and 1977 recorded at the Friar's Carse gauging station.

John Nicolson (No 15) During floods and fast flowing water conditions the gravel on the river bed moves. If the gravel islands are not removed they would eventually undermine the Caul.

Mr & Mrs Donald & Rosemary Robertson (Nos 4 & 5) Details are provided in the original objection and [further written submission](#). The height of the barrier is above any known level of flooding. Why would removal of the gravel islands at the Caul make no difference but

removal of sediment at Devorgilla Bridge would mitigate flooding anticipated upstream. The scheme is unlikely to be maintained. A wall set back a couple of metres from the riverside could provide an acceptable alternative solution. Any scheme needs to include protection for residents from upstream flooding. A few centimetres increase could make the difference between a property flooding or not.

Dr Waite (No 322) Modelling involves many factors, some variable; a small error can result in large consequences. The data relating to river flow has been considered as taking place in a channel of relatively fixed dimensions, this is not actually the case. It does not appear that the calculations make allowance for the effect of failure of upstream earth embankments which often rupture in big flood events.

A. Watson (No 33) It is important that a barrier be put along Welldale at least as far as the bridge. The road at this area presently floods preventing any access to residential properties including by emergency vehicles. It would be impossible to be rescued by boat due to the fast flowing river. When Whitesands floods it is possible for people to get out of the way and it is not such a danger to life as it is at Welldale.

M. Zygodlo (No 325) The flooding is partly due to the canalisation of the river above and below the town, more canalisation is illogical.

Council

3.57 The council's position is set out in its [inquiry statement on technical matters](#), in the precognitions of [Stuart Callander](#), [Tim Jolley](#), [James McLeod](#), [Rob Sharpe](#), [Paul Swift](#) and [Dr John Chatterton](#) and in its [closing submission](#).

Standard of Protection

3.58 Scottish Government guidance sets out that local authorities should decide what standard of protection they wish to promote, taking account of local influencing factors. A number of factors can influence the choice of option and level of protection such as hydraulic, economic, technical, operation and maintenance, environmental, landscape and visual factors. Consideration was given to the depths of flooding being experienced, for example in Storm Frank, December 2015, flood water at the Sandy Opening was between 1.5 and 2 metres above the level of the Whitesands car park. The hydraulic modelling predicts that significantly deeper water depths can occur in larger flood events.

3.59 Following the initial modelling undertaken by Mouchel a scheme protecting Whitesands to the 1 in 200 years return period was not favoured as it would require a barrier of a height that would have severe visual impacts upon townscape, effectively separating the town from the river. Stakeholders in the charrette did consider the opportunities for the 1 in 200 years standard of protection but the outcome of that consultation process was to pursue a scheme based on a 1 in 25 years return period. The additional modelling undertaken by Mouchel demonstrated, however, that there was potential to increase the level of protection to a 1 in 75 years return period as the design levels, being in the order of 300-400 millimetres, were not significantly different. The council therefore chose to progress the more robust level of protection as it would provide confidence to those who live and work in the area encouraging investment in existing businesses. The additional level of protection might also improve opportunities for flood insurance. Further public consultation resulted in the current scheme incorporating a

combination of glass and demountable aluminium panels to reach the desired 1 in 75 years level of protection whilst addressing the concerns regarding the height of the barrier.

Modelling

3.60 The assessment of construction and operational impacts is set out in the ES. In terms of hydrology and hydromorphology the following points are noted:

- The only property which would have increased flood risk is the Old Bridge House Museum, this would be subject to local flood protection in order to remove this risk.
- The scheme would have a negligible impact on the current morphological condition of the river. Post construction monitoring is recommended at a number of locations to identify potential morphological changes and quantify sediment features that may affect the future functioning of the scheme.
- Future monitoring of localised scour at Devorgilla Bridge should be considered.
- Periodic maintenance of the gravel bar down-stream of the Caul should be considered. Reducing the bar would have little impact on water levels but would help provide additional stability of the river wall.

3.61 The scheme has been developed following lengthy and comprehensive analysis of the hydrology of the River Nith. It has been reviewed and updated at appropriate times to include additional data, software updates and recalibration to ensure that modelled flood levels were consistent with actual flows. This includes recalibration to take account of data for Storm Frank in December 2015. That event was estimated by SEPA to have a return period of approximately 1 in 25 years, this being of the same order as the permanent element of the defences in the proposed scheme. The modelling has used the most up to date SEPA records and is consistent with its guidance and with industry practice. SEPA has audited the hydrological and hydraulic model and confirmed that it is robust and accurate.

3.62 The Hydraulic Modelling Report indicates that historic mapping and studies have shown the River Nith has retained a stable meandering pattern over the past 150 years. The channel in the vicinity of the proposed scheme has remained relatively stable and 'fixed' in place as a result of urban development and riverbank engineering. The Hydro-morphology Assessment reaches the following conclusions in relation to the impacts of the proposed scheme:

- There is likely to be no change in the sediment regime in the River Nith or the Cluden Water.
- The overall impact on the modelled velocities of the River Nith and the Cluden Water would be minimal.
- The proposed removal of the sediment berm and vegetation at the eastern arch of Devorgilla Bridge is unlikely to have a detrimental impact on the existing morphological regime.

- The overall impact on river channel morphology, from a hydraulic perspective would be negligible.

3.63 The Hydro-morphology Assessment indicates that the greatest change in velocities on the River Nith is predicted between Devorgilla Bridge and the masonry weir known as 'the Caul'. However, the predicted slight decrease in velocity and increase in water levels should not cause significant issues.

3.64 The scheme includes an allowance for 'freeboard', or residual uncertainties relating to hydrological matters and physical processes such as surface waves and settlement of embankments. The freeboard was calculated using the Environment Agency Fluvial Freeboard Guidance Note. Although more up to date guidance is now available it is considered that it does not impact upon the hydrology and hydraulic modelling elements of the freeboard calculated

3.65 There is no legal obligation to construct a scheme for climate change impacts on the level or number of flood events or to apply a specific climate change allowance. However, in accordance with the thrust of national policy it is prudent to take climate change into account, this has been done. Mouchel carried out sensitivity analysis with the effect of climate change for 10, 25, 75 and 200 years return periods within the final recalibrated model. A flow allowance of 20% has been included in the model to replicate the effect of the climate change. Table B3 in Appendix B of the report indicates the water levels for various return periods with the climate change allowance both with and without the scheme. Climate change may alter the return period but it won't impact on the hydraulics of the model.

3.66 SEPA's preferred approach is to ensure that there is design flexibility to accommodate climate change in the future rather than specifying any particular climate change factor. The scheme has been designed so that the walls can be raised by up to 0.6 metres in the future to respond to climate change without needing to reconstruct the foundations. Any decision on whether to increase the height of the defences is a matter to be considered in the future taking account of the frequency and levels of flooding and visual impact.

3.67 While levels at Whitesands are influenced by the tide, maximum water levels are dominated by flows in the Nith. The downstream boundary for all design flows was fixed at a mean high water spring level of 5.0 metres AOD (above ordnance datum), this is a precautionary assumption that assumes the tide and river flood peaks coincide at the same time.

Impacts Up and Downstream

3.68 The modelling identified no increases in maximum water levels downstream of Whitesands as a result of the proposed scheme. It shows that the scheme would slightly increase flood levels at some properties in Nunholm and Goldie Crescent. Modelling and assessment was undertaken to identify what measures could be undertaken to offset the identified increases in upstream water levels; the findings are presented in the Devorgilla Bridge-Additional River Measures report. The six options assessed were removal of the weir (the Caul), natural flood management measures in the upstream catchment, riverbank re-profiling and realignment, a change to riverbank material, restoration of the capacity of

the river channel at Devorgilla Bridge and local flood defences at various locations to protect specific areas.

3.69 The report indicated that removal of the category B listed Caul would decrease water levels at the key locations. However it concluded that it was very unlikely to be viable due to the potential impacts on fluvial geomorphology, the gravel bars downstream, the foundations of upstream structures and it would be challenging technically and in terms of gaining other consents. It was concluded that natural flood management measures alone would not be a viable option as the reduced level of flow required to ameliorate water levels at the key locations is greater than could be expected from such measures. The re-profiling of the riverbank and changes to the riverbank materials were ruled out as significant bank clearance would be required and these options would not achieve the required mitigation and would increase water levels at some locations. The build-up of sediment at Devorgilla Bridge has reduced the capacity of the river channel at this location. Restoring the capacity of Devorgilla Bridge by removal of sediment along the left bank of the river in the vicinity of the easternmost arch would reduce upstream water levels at all key locations. Local flood defence measures would not have a significant impact upon the water level in the main river channel but would protect properties against a 1 in 75 years event. However as this would involve additional land take and negotiations with land owners this option was not recommended unless one of the fully effective measures could not be implemented. Local flood defences at Nunholm have therefore not been pursued as sediment removal offered the same objective without requiring the acquisition of land.

3.70 The updated modelling results are presented in the Hydraulic Modelling Report. The model was used to appraise the potential mitigation measures that had been considered. The report concluded that removal of sediment at Devorgilla Bridge would ensure that, with the exception of the Old Bridge House Museum, flood levels would not increase following implementation of the scheme. [Nunholm Model Results Technical Note, July 2017](#) gives model results specifically for that area. The analysis was undertaken for 1 in 5, 1 in 25, 1 in 75 and 1 in 200 years return periods. It concludes that the scheme, with the inclusion of the proposed mitigation, would reduce water levels at Nunholm for all of the return periods tested. The modelling confirms that the removal of sediment at Devorgilla Bridge is a hydraulically effective solution to addressing upstream impacts of the scheme.

Option Consideration

3.71 As part of earlier investigations the 'Whitesands Flood Risk Appraisal Report' (Jacobs 2007) assessed numerous options. In developing the current scheme all feasible options have been assessed, including those previously considered. The Design Justification Report sets out the background to and presents an overview of the options assessment process.

3.72 The options appraised included 'do nothing', natural flood management and upstream storage, localised dredging, removal of the gravel bars downstream of the Caul, self-rising or temporary barriers and a range of engineered defences. The do nothing option is contrary to the council's statutory obligations to reduce flood risk and is inappropriate given that Dumfries is identified as a Potentially Vulnerable Area in the Solway Flood Risk Management Strategy.

3.73 In terms of natural flood management hydraulic modelling was used to determine the effects of channel and floodplain measures in the Nith catchment area. The modelling and

a pilot study of natural flood management undertaken by SEPA indicates that it could potentially reduce run off and attenuate flows at Whitesands. The modelling concluded that natural flood management would be effective for low to medium scale events and could reduce water levels in Dumfries for return periods up to 1 in 75 years. However natural flood management would not negate the requirement for direct defences at Whitesands and would not make a significant difference to the height of the defences, only reducing them by a few hundred millimetres. SEPA confirmed that, although a study has been undertaken into potential natural flood risk management measures within this catchment, there is currently no credible, robust evidence that such measures can remove the need for direct defences at Whitesands.

3.74 The modelling also showed that during large flood events overtopping of upstream offline water storage areas or reservoirs would cause water to return to the river resulting in increased peak flows at Whitesands. This is referred to as the 'synchronisation effect' and would occur at flood events of 1 in 100 years and above. Furthermore, storing water behind defences relies on their integrity. Existing flood banks along the river are of low quality construction with no impermeable core and are subject to failure. Pursuing this option would require the replacement and future maintenance of thousands of metres of embankment. It would also entail engagement with and payment of compensation to multiple land owners. Given that upstream storage would only achieve modest reduction in water levels and would not offer any benefit beyond a 1 in 100 years return period this option was dismissed.

3.75 The impact of dredging is influenced by hydraulic factors which can reduce its effectiveness. At Whitesands the hydraulics are complicated by tidal effects, the presence of bridges and the weir, the high volume of water and high energy flow. Removal of the gravel islands would only reduce peak flood levels in a 1 in 200 years flood event by about 5 millimetres due to the large peak flow and the influence of downstream levels. The modelling demonstrated that removal of the gravel island would not influence the flooding in Whitesands. The hydraulic modelling report considered the reduction in channel bed levels by 100 millimetres between the cycle bridge and St Michael's Bridge. The results showed that water levels would only fall by between 2 and 62 millimetres, which is insufficient to contain the design flow. Dredging would not provide a suitable solution and would have significant impacts on the structural stability of the bridges and river wall.

3.76 The council robustly and conscientiously considered the self-rising barriers option, its comparative assessment of the proposed scheme and the self-raising barrier system is set out in [committee report of 7 October 2015](#). This option was discounted for a variety of reasons including construction requirements, maintenance, cost, potential constraints and uncertainties regarding the suitability of the technology. Comparative costs are also provided at paragraph 5.14 of the precognition of Stuart Callander. At the time when the council was asked to consider this option the self-raising barrier at Cockermouth was the only known example in the UK. The costs used for the appraisal of this option were based on an estimate received from UK Flood Barriers for the supply and installation of 1098 metres of barrier. The costs were reviewed by a civil engineering company with experience in this form of construction who advised that they were reasonable. These were extrapolated to obtain a cost for the linear length of the scheme, allowances were also made for ancillary works.

3.77 A number issues were identified with this system. There is a requirement for support posts between the barrier panels, these would raise technical, visual and heritage issues.

The system needs to be maintained and tested regularly to give confidence that it would operate when required. The barrier at Cockermouth is of a shorter length, lower height and relatively straight. The circumstances are not comparable to Dumfries where a larger scale barrier would be required and where there are other issues that need to be taken into account. There are no examples of such a system being used in comparable circumstances, the technology is therefore untested. The system is also potentially vulnerable to vandalism and failure without warning and cannot be increased in height if required in the future. Irrespective of the consideration given to this option by the council it would be inappropriate for this to be contemplated by the Ministers as an alternative to the proposed scheme.

3.78 The assessment concluded that some measures could provide localised flood reduction but these would not provide a solution on their own and would not provide a suitable solution to the problems of flooding in Dumfries. The modelling has demonstrated that direct defences are needed at Whitesands in order to provide protection from flooding in the town centre. The proposed scheme is considered to be the optimum solution.

Cost-Benefit Analysis

3.79 The overall value for money of the scheme is expressed in terms of the cost benefit ratio and is set out in the [Economic Appraisal](#). The cost benefit analysis has been undertaken using an objective approach in accordance with the [Green Book](#) (HM Treasury 2013) and the Multi Coloured Manual guidance as well as supporting information from the Office for National Statistics and the Scottish Assessors databases. The economic appraisal for the scheme was updated in 2017 taking account of the updated hydraulic modelling. The costs are based on the present design which remains preliminary as further investigative and design work is required before the design can be finalised. As with any construction project the costs will develop as the scheme is developed and can only be determined after detailed design drawings have been prepared and the tendering process has been completed. The costs produced in 2016 and contained within the economic appraisal included additional matters such as design fees, investigation, land purchase and legal costs and a contingency allowance. Although concerns have been raised in relation to lack of detail the flood protection scheme drawings are not intended to contain sufficient detail to allow construction.

3.80 The initial appraisal predicted overall damages avoided as a result of the scheme as £99.6 million and the estimated present value costs being approximately £29,854,167. A breakdown of the costs of the scheme are set out in Appendix A of the appraisal. The cost estimates included amounts for investigations, design, construction, maintenance and an allowance for contingencies. The assessment included flood damage to existing properties that would be avoided as a result of the scheme. In addition to direct damages the methodology includes intangible damages to transport infrastructure and clean up and emergency costs. The average annual damages are calculated for the 100 years lifespan of the scheme. The costs are similarly taken for implementation, operation and maintenance over the 100 years period. The economic viability of the scheme was initially assessed as having a cost benefit ratio of 2.25.

3.81 An expert review of the economic appraisal was undertaken by Dr John Chatterton following identification of an arithmetical error in the calculation of the cost benefit ratio. Dr Chatterton's review is set out in detail in his precognition. In undertaking the review of the appraisal he sought to ensure that it met the appropriate guidance and applied the correct

approach and methodology. During the inquiry a revised version of table [4.1 and table 4.2](#) were lodged as a replacement for those used in the economic appraisal.

3.82 The review found that the correct figure that should be attributed to the present value of damages avoided is £38 million, not £99.6 million. The calculations are based on flooding affecting 45 residential and 91 commercial properties, these were identified by mapping modelled flood events. The annual average damage avoided is calculated to be £1,348 per residential property and £708 for commercial properties over the 100 year lifetime of the scheme. The present value of benefits does not allow for the higher damage costs that would result from including climate change. The review confirmed that the methodology that has been used is correct and that it complies with Scottish Government guidance and that contained within the Green Book.

3.83 The inclusion of risk as initially assessed was also reviewed by Dr Chatterton. The economic appraisal methodology uses a process referred to as 'optimism bias' to account for uncertainties in the cost process since eventual costs are invariably higher than appraisal costs. At the initial design stage it is conventional to provide for an optimism bias of 30%. This is in accordance with Scottish Government guidance on assessment of flood protection schemes. As a project progresses and the design details develop it is conventional to apply a lesser figure as a contingency. At the present stage in the development of the scheme the "Monte Carlo" risk figure (the name of the software programme used) indicates an optimism bias of 16% should be applied. Having regard to the revised values and applying a 16% contingency the cost benefit ratio is 1.35. As the scheme achieves a cost benefit ratio greater than 1:1 it demonstrates an acceptable return on public funds.

Design Robustness/Maintenance

3.84 Maintenance is addressed in [Annex T 'Operational and Maintenance Arrangements'](#). The scheme is designed to ensure safe and efficient operation and maintenance. It would require minimal manual intervention and utilise tried and tested technology used in the UK and internationally. Although glass panels have less history of usage the concept is simple. The level of technical details available is appropriate for this stage in the scheme.

3.85 Mr McLeod indicated in his evidence that the council presently has a maintenance regime for the river walls and they are in good condition with no obvious defects. The [Greensands and River Wall Inspection Report](#) (Mouchel January 2017) indicates that there is currently no engineering requirement to strengthen or replace the river walls as they are generally in a fair condition and can undoubtedly be classed as performing satisfactorily. Some remedial work is recommended to enhance their condition and prolong their life. It concludes that the flood protection scheme would not generally increase the loading on the existing Whitesands river walls. However it is recommended that they be monitored prior to, during and post construction and the removal of sediment at Devorgilla Bridge. The 2009 Act places a duty on the council to inspect and maintain the scheme.

Water Drainage Infrastructure

3.86 The scheme includes drainage works to alleviate pluvial flooding from the surface water drainage network, Scottish Water sewers and the Loreburn and Millburn culverted watercourses which discharge to the river. [The Surface Water Drainage Strategy Technical Note](#), (Mouchel 2017) analysed the interface between the scheme and Scottish Water's

infrastructure and included detailed analysis of the interaction with the culverted watercourses and the river. Options to address surface water runoff and avoid surcharging from the burns have been assessed. The preferred option, incorporating pumping stations, has been designed in consultation with Scottish water, to avoid flooding from the combined sewer network. Although there is no legal obligation to include Sustainable Urban Drainage (SUDS) this forms part of the scheme. The foundations of the bund include an impermeable barrier to prevent seepage and drainage pipes at the base of the defences would allow water to drain away quickly. SEPA has also been involved in the development of the scheme and has no objections to the drainage proposals.

Reporters' Conclusions

3.87 We have considered all of the objections received in relation to technical matters, most fall within the following headings with the exception of some points which are addressed under other matters within this chapter.

Standard of Protection

3.88 The Scottish Government Guidance on flood risk management in place at the time of the Flood Protection Order was [Delivering Sustainable Flood Risk Management Guidance, Scottish Government June 2011](#). Updated guidance was issued in February 2019, however it does not contain any material changes which would alter our findings on technical matters.

3.89 The guidance does not prescribe the level of protection to be offered by a flood protection scheme. Both the 2011 and 2019 guidance indicates that a variety of protection levels should be considered during the design process but note that application of a common standard of protection for all flood protection work would mean that due regard may not be given to the value or importance of assets. The guidance also indicates that both temporary and permanent options should be considered, including the use of demountable defences.

3.90 The permanent barriers within the proposed scheme are designed to provide a 1 in 25 years level of protection. With the demountable panels added the scheme is designed to provide protection up to a 1 in 75 years event. The council has compromised on the height of the defences to reduce visual impact resulting in a reduced level of protection. The scheme should therefore prevent the flooding which occurs most frequently at Whitesands. A flood higher than 1 in 75 would over top the barrier but this would not lead to the same volume of water reaching the Whitesands area than if there was no barrier. A flood protection scheme can reduce risk but as the 2009 Act recognises there can be no guarantee that flooding can be eliminated entirely. As the scheme would result in reduced flooding it would therefore contribute to the council's statutory duties required by the 2009 Act.

Modelling

3.91 Hydrological models are standard tools employed in the design of flood protection schemes. Any such model is a mathematical simplification of complex natural processes. The model has been calibrated with real events to improve understanding of the river system. We accept that available data is inherently limited for extreme events because they are so rare and each extreme flood event would be unique. However the model used

in this case has been developed and refined over many years by appropriately qualified experts with input from SEPA who confirmed that it has been engaged throughout the process. SEPA has stated that it represents the most up to date assessment of river flooding for the lower River Nith and that it provides a suitable baseline model to appropriately assess potential flood management options for the Whitesands. It considers the hydraulic modelling to be robust and in line with both its technical guidance and SEPA's [Flood Modelling Guidance for Responsible Authorities](#). We accept that no such model can be 100% accurate and we recognise that a large number of objectors remain sceptical about reliance on the model. However, we have not been presented with any evidence of an alternative better understanding of the river system and the processes involved. We can see no alternative to using a model developed by experienced professionals over many years and independently verified by SEPA.

3.92 The 2009 Act and the 2010 Regulations do not require that a specific allowance be included for climate change in the design of flood protection schemes. SPP indicates that the planning system should promote a precautionary approach to flood risk taking account of the predicted effects of climate change but it does not set out a specific allowance that must be included. Neither does the Scottish Government flood risk management guidance specify a particular allowance; it advises that flood management actions should be tested against long term trends with a range of future scenarios examined including a worst case scenario. It advocates a risk based approach linking benefits to costs with the aim of maximising the reduction in overall risk. However the guidance indicates that the responsible authorities should avoid making decisions that would make it more difficult to manage the effects of climate change and it is expected that a scheme would have flexibility to allow for this. We heard from SEPA that the inclusion of a specific allowance for climate change is not a requirement for flood protection schemes in Scotland. Climate change should be addressed by adopting flexible designs which allow adaptations if required in the future.

3.93 Consideration has been given to climate change in the modelling and the design of the scheme but it is not intended to be built to a height that includes an allowance for that issue. It is, however, designed to incorporate an element of flexibility to allow for future adaptations to increase the height of the defences if it is determined that this is necessary and appropriate. We are therefore content that climate change has been adequately addressed. Any required future increased level of protection taking account of climate change would be assessed as a different scheme and associated flood protection order.

3.94 We are content that the modelling does incorporate an allowance for freeboard. The council has stated that the freeboard allowance includes uncertainties in hydrology and hydraulics and also physical processes such as wave surcharges. In addition SEPA's consultation response indicates that it is supportive of the freeboard approach used and allowances adopted and that the amount of freeboard was, overall, appropriate. We find no reason to support the objections that freeboard and tidal influences have not been adequately addressed. We are also satisfied that Tidal influences have also been considered in the modelling.

3.95 Taking all of the aforementioned into account we are satisfied that we can have confidence that the model forms an appropriate basis to assess the proposed scheme.

Impacts Up and Downstream

3.96 The modelling indicated a significant reduction in flood depths within the proposed flood defence area but small localised increases upstream at Goldie Crescent, Nunholm Road, Riverside Court and the cycle bridge. The maximum increase in flood levels is +0.06 metres (i.e. 6 cm). The modelling concluded that the removal of sediment in the vicinity of the easternmost arch of Devorgilla Bridge would ensure a neutral effect on flooding. With this mitigation only one property, the Old House Bridge Museum, would be subject to an increase in water level but it is stated that resilience measures for that property would be included as part of the flood protection scheme.

3.97 SEPA has advised that in the context of both the model and this stretch of the River Nith, such an increase would be unlikely to represent a materially significant increase in flood risk relative to the existing situation. It has stated that the number of hydraulic structures located between the proposed scheme and the areas of predicted rise mean that their local influence on hydraulics could be within general model tolerances, rather than an actual impact. The predicted increase of 6 cm is well within the model tolerances of 15 cm stated at page 84 of SEPA's flood modelling guidance.

3.98 During our site inspections we visited various locations within the Nunholm area, including the gardens and basements of some of the residential properties. It is perfectly understandable that residents of the Nunholm area would be concerned at any prospect of an increased likelihood of upstream flooding and would seek guarantees that this would not occur. We also note the objections concerning the accuracy of the data and the consequences of potential for errors in the modelling. As noted in SEPA's flood modelling guidance errors in data, model schematisation and analysis can have a major effect on study results. The guidance indicates that at worst, if these errors are not identified, decisions could be made based on incorrect modelling, for instance flood defences could be built to the wrong level. Although the comments from SEPA contain a caveat regarding the accuracy and completeness of the information in our view this is simply a standard disclaimer. SEPA has indicated that it is satisfied with the modelling and the conclusions reached. We attach weight to the advice provided by SEPA and see no basis for assuming that SEPA staff or the council's appointed consultants are seeking to mislead.

3.99 We are satisfied that the modelling and hydraulic appraisal undertaken are the best available evidence on the impacts of the scheme. However, in dealing with natural and dynamic processes it is not possible to guarantee that the outcomes would be absolutely as predicted. It also has to be accepted that the scheme would not prevent all future flooding, it is not intended to do so. On the basis of the evidence before us, including the expert advice from SEPA, we consider that there is no reason to assume that the scheme would increase flood risks to Nunholm, or anywhere else, over and above what already occurs.

3.100 In terms of the mitigation proposed to address any potential impacts upstream we note that the Hydrological Assessment Report indicates that sediment would continue to be deposited at Devorgilla Bridge due its position on the inside of a meander and the influence of the Caul. The 'Devorgilla Bridge Additional River Measures' Report also indicates that the assessment of the fluvial geomorphology implies that to be sustainable a maintenance regime should be established to ensure that the sediment bar does not build up with time and increase upstream water levels.

3.101 The prospect of repeated removal of sediment at Devorgilla Bridge is addressed in chapter 5 where we conclude that the frequency and amount of sediment removal cannot yet be established. However, we agree that there would be an ongoing requirement for the council to monitor the sediment accumulation and that the mitigation may be required to be repeated during the life span of the scheme. It is therefore not unreasonable that the objectors have questioned whether the council would maintain the scheme in the longer term.

3.102 The council has given a verbal commitment to undertake such work and accepts that it has a duty to maintain the flood protection scheme. It has not specifically commented on whether this legal duty extends to the sediment removal. Sections 18 and 59 of the 2009 Act place a duty on local authorities in relation to 'clearance and repair works' that would substantially reduce a 'risk of flooding'. This includes clearing of obstructions, or things that are at significant risk of becoming obstructions, from a body of water. We recognise that flood risk management is an ongoing statutory duty for the council and we believe that any further sediment removal that may be required in the future would fall within those obligations. However we propose a condition requiring that the council implement the mitigation measures at Devorgilla Bridge. We shall go on to discuss wider maintenance issues later in this chapter and address conditions in further detail within chapter 8.

3.103 We recognise that Nunholm does experience flooding and is within the Potentially Vulnerable Area. While it would benefit from a scheme of flood protection the confirmation of the submitted scheme would not preclude implementation of a scheme for Nunholm at a later date. We would expect that the council and others would work with residents to improve flood risk management at this location.

3.104 We accept that the predicted benefits from the removal of the berm are also within modelling tolerances. However, at worst the modelling shows that the removal of the berm is beneficial. We therefore find, that so far as the current understanding of the River Nith allows, there is no reason to assume that the proposed scheme would increase flooding up or down stream.

Option Appraisal

3.105 Many objectors have strongly stated that various alternative options have not been properly considered and would be preferable to the scheme proposed. Our role is to consider objections to the published flood protection scheme, but that has to be in the context of the proposed scheme. It would not be appropriate for us to assess or recommend to Ministers that they adopt a different scheme. However, if it was clear that there were superior alternative options, as put forward by some objectors, then that could form the basis for Ministers deciding not to confirm the proposed scheme.

3.106 The 2011 and 2019 Scottish Government flood risk management guidance does not specify certain design standards. Instead, the approach adopted should be entirely risk based; linking benefits to costs, with the aim of maximising the reduction in overall risk. This approach requires options to be compared on the basis of the effect that they are expected to have on the frequency and impact of flooding in a specified area. Over the lifetime of the project to date, there have been various options appraised at various different times. There is therefore no single, up to date options appraisal. However, it is not fair to say that there has been no options appraisal. All the various options have focused primarily

on addressing the issue of flooding at Whitesands and principally took into account flood depths experienced at this location.

Catchment management and offline storage

3.107 Catchment management is a generic term that refers to a range of measures that would enhance natural flood management and include tree planting or restoring natural river morphology. A number of objectors argued that this should be pursued instead of engineered flood defences. However, the ES states that the additive effect of upstream natural flood management measures to reduce flood levels at Dumfries during periods of high flow would be negligible and modelling has demonstrated that they are not a feasible alternative to a traditional engineered solution at Whitesands. This was confirmed by SEPA at the background and context hearing session. We conclude that whilst catchment management measures may be helpful, there is no quantifiable evidence that any combination of measures would be able to address the increase in river flows leading up to a major flooding event.

3.108 Offline storage means creating a storage area for flood water upstream of Dumfries thus reducing river flows in Dumfries itself. It was a measure that was pursued by some of the earlier technical reports commissioned by the council. We heard evidence from three sources, including Mr McLeod, that the impact of Storm Frank was mitigated due to inadvertent offline storage when banks upstream were removed, or failed, causing flood water to flow into riverside fields. It is therefore a technically viable option.

3.109 However, modelling has shown that whilst offline storage could reduce the water levels at Whitesands at flood events of less than 1 in 75 years it would only achieve modest reduction in water levels. The modelling found that no upstream storage option negated the requirement for direct defences at Whitesands. In addition, the model shows that 'synchronisation' may occur in extreme events whereby water would overflow from offline storage areas back into the river, resulting in increased peak flows of water downstream. This would increase the impacts of an already serious event at Whitesands. It is accepted that this would only occur at floods of 1:100 years and above however the risks and impacts should not be understated. The fact that such an event may be rare does not mean that these consequences can be lightly dismissed.

3.110 Even if the matter of 'synchronisation' is ignored, offline storage as an option would have other difficulties. The storage capacity would have to be carefully calculated and could involve the purchase and compensation for a significant area of land. The design of the banks would also have to be carefully engineered to ensure they impounded the flood water and also would need to be maintained. These could both come at significant cost. We therefore consider that it is not unreasonable for the council to have concluded that the benefits are outweighed by the costs.

3.111 The Solway Local Flood Risk Management Plan states that SEPA has a duty to identify where there is potential for natural flood management techniques to be introduced. The plan indicates that such measures are not a specific part of the management of flood risk in the Dumfries Potentially Vulnerable Areas, although natural flood management methods are being considered in the Nith catchment. The implementation of the proposed scheme would not preclude catchment management and offline storage from being reconsidered at a later date to compliment other flood risk management measures.

Dredging

3.112 Mr Swift clarified that removal of gravel islands and dredging are not the same thing. The model shows that removal of the gravel islands would only result in negligible change to water levels, approximately 5 millimetres (mm). Dredging to reduce the channel bed levels by 100 mm at Whitesands and an extent up and downstream to increase channel capacity would only reduce water levels by an amount which is insufficient to contain the design flow. Those thinking that dredging might help are unaware of the massive magnitude that would be needed to accommodate the volume of flood water, particularly in an extreme event. Dredging is expensive and would have to be repeated regularly as material would be redeposited from the tidal cycle and upstream river catchment. It would also have environmental impacts and may face significant regulatory barriers. Consequently it is not considered to be a sustainable option. It is clear to us that the removal of the sediment berm, as specified in the scheme, is for a localised improvement in river capacity at a particular “pinch point” and is not comparable to any wider dredging operation. We are therefore satisfied that dredging and removal of the gravel islands on their own would have insignificant benefits and would not form a suitable alternative to the proposed scheme.

Self-rising barrier and low wall

3.113 A self-rising barrier is a flood activated barrier which in simple terms is raised by the barrier “floating” on water flooding into a chamber. There was no dispute that self-rising barriers are a recognised and viable technology that have been used in various situations. There were various alignments suggested for either a low permanent wall or a self-rising barrier of various heights, including along the line of the river wall, set back from the river wall or closer to the buildings at Whitesands.

3.114 We accept that a low wall or self-rising barrier would address the main criticism of many objectors about the visual impact of the proposed scheme. As a self-rising barrier only activates in an actual flood event, most of the time it would be flush to the ground and would therefore have limited impact on the current parking arrangements at Whitesands. Both Mr Femont and Mr Marchant argued that their products were more economical to maintain, which would offset any initial higher installation costs.

3.115 A low wall or low self-rising barrier would most likely stop the annual flooding events. Although no detailed scheme has been prepared, we consider it is reasonable to presume that a low wall would be cheaper than the proposed scheme but it is not possible to know by how much. An obvious disadvantage of a low wall (whether permanent or self-rising) is that it would only address flood risk for the relatively minor flood events. It would not be able to protect Whitesands from the more extreme events when the most damage would be caused.

3.116 We consider the cost benefit analysis of the proposed scheme in paragraphs 3.129 to 3.137 below. However the standard UK methodology, also used by the Scottish Government, compares the cost against the anticipated savings from reduced flood damage. As most damages occur with more extreme events, any low wall is unlikely to achieve an acceptable cost benefit ratio. The proposed scheme designed for a 1 in 75 years event only just received a positive ratio. There would therefore be a significant risk that the council would have to fund a low wall solution itself. Furthermore, with increasing

frequency of flooding events with climate change, a low wall could relatively quickly become redundant over any reasonable design life for a flood defence scheme.

3.117 The council did assess two high self-rising barrier options. One along the existing river wall and one set back from the river by approximately 5 metres. In essence, the council found either choice would be more expensive and had other technical concerns. The council have been criticised by some objectors for carrying out an unfair assessment and therefore dismissing a viable alternative prematurely. The two schemes assessed by the council were hypothetical and included significant contingency provision. We accept that it is possible the total cost could have been overstated. However, neither Mr Femont nor Mr Marchant were in a position to provide any detailed scheme as an alternative that could be costed.

3.118 Irrespective of the cost, it is clear to us that there are a number of technical issues that would apply to a high self-rising barrier. It is likely that there would have to be a low wall to support it. There would have to be a deep cavity excavated to house the wall and associated equipment. The need for a deep cavity would have civil engineering consequences which include, structural stability, additional means of support, line of services, seepage and archaeology. The technology is currently under patent. Specially tailored moulds would have to be made in advance and the sections of the barrier transported to site. There would be a requirement for testing and maintenance and no guarantee replacement parts would be available if a company ceased trading. The junction with Devorgilla Bridge would require particular attention. Any changes in height would require a new design. Mr Femont conceded that to date, self-rising barriers have either been lower or of a reduced length than would be required at Whitesands.

3.119 This does not mean any of these technical challenges cannot be overcome. However, they do represent additional engineering and financial risks which would need to be quantified if a high self-rising barrier was to be considered a viable option. We would note that any scheme that was more expensive than the proposed scheme would have a lower cost benefit ratio, which depending on the degree, might be less than the required minimum of 1:1.

3.120 Notwithstanding the obvious potential advantages of a self-rising barrier, those objectors advocating such an option cannot at this stage be aware of the engineering and financial risks. Ultimately, this is a decision for the council who has been given the responsibility by statute to provide, maintain and part fund the flood defence scheme. The council has taken advice from its appropriately qualified officials and appointed consultants. Under the circumstances, we do not consider it unreasonable that the council officials and the council's consultants have adopted a cautious approach to the matter of a high self-rising barrier.

3.121 Various options have been assessed at various times throughout the development of the project. We accept that there are a number of potentially viable alternative options. It is the nature of such an exercise that any option will have a mix of advantages and disadvantages. However, overall, we are satisfied that no alternative option has been demonstrated to be so technically or financially superior that it casts doubt on the suitability of the proposed flood defence scheme.

Design Robustness/Maintenance

3.122 The proposed scheme has been developed by qualified council and independent engineers who have advised that it utilises simple, tried and tested standard flood protection products. We consider that it is unreasonable as a starting point to assume that those council officials have acted in anything other than in good faith. We accept that details have yet to be fully specified and that further site investigations are required; this is not unusual for any construction project and is not a deficiency in the scheme. We are satisfied that the level of detail provided is sufficient for the purposes of the Ministers' consideration of the scheme.

3.123 The demountable panels are only required for events greater than 1 in 25 years. We heard evidence that the council's warning from SEPA of serious flooding is likely to be days in advance of such an event. We also heard evidence on the council's current arrangements for responding to flooding at Whitesands. It is likely that there would be sufficient warning given to allow for the deployment of the demountable panels. We do accept that the use of demountable barriers represents a risk that the council would have to manage very carefully but this is not the same as being technically vulnerable.

3.124 We find no technical evidence that suggests the scheme would have an adverse impact on the structural integrity of Devorgilla Bridge. The technical reports indicate that the scheme would reduce the loading upon the bridge during flood conditions and we conclude that monitoring of the effect on scour at the bridge may be addressed by the council's statutory monitoring and maintenance arrangements. The integrity of the scheme relies upon the condition of the river walls, however we heard in evidence that the council monitors and maintain the walls in accordance with its statutory duty to do so. We have no reason to assume that it would not continue to fulfil its obligations. Having heard the evidence of Mr McLeod we are satisfied that conditions are not necessary in relation to monitoring of the river walls or scour at Devorgilla Bridge. In our view such monitoring and any works that may be required to these structures may be addressed by the council's statutory monitoring and maintenance arrangements. We take a similar view in relation to the post construction monitoring to identify potential morphological changes and quantify sediment features as recommendation by Mouchel.

3.125 Concerns have been raised regarding the ability of the scheme to withstand the force of flood water and whether the ground upon which it is situated is sufficiently stable. The scheme has been designed following a significant amount of hydrological, hydro-morphological and engineering assessment and analysis. We heard in evidence that ground investigations would be undertaken prior to construction. The barrier would be specifically engineered to provide flood protection and it would contain an impermeable core. There is no technical evidence that suggests that the scheme would not stand up to the forces that it would be designed for. Concerns have been raised that the area may flood during construction. This is a possibility that the council and its contractors would have to plan for and address this in terms of health and safety requirements. However there is no reason to conclude that this could not be managed particularly as advance warning of flood events is available to the council.

3.126 We accept that there can never be any absolute guarantee that any designed scheme would never fail. Nevertheless we have not been presented with any technical evidence (as opposed to generalised concerns) that leads us to conclude that it may not withstand the force of the flood water or that the design is vulnerable to failure. Should the

Ministers have any concerns in this regard then further independent verification could be sought. We accept that maintenance would be very important to ensure the integrity and longevity of the scheme. As noted above the 2009 Act places a duty on the council to inspect and maintain flood structures. Despite the criticisms made by the objectors the council do already maintain very many structures such as roads, bridges and buildings, to the point where this goes unnoticed or is taken for granted. Difficulties in some local projects or individual instances of lack of maintenance does not mean that it cannot fulfil its duty to maintain the flood protection scheme. There are likely to be potentially serious consequences should the council fail to undertake any statutory duties to maintain the scheme. We recognise that it is also important that the council maintain the cosmetic aspects of the scheme, this would be important in terms how the scheme is perceived in the long term. We address this matter further in chapter 4 Visual and Heritage Impacts.

3.127 Over the life of the scheme sedimentation at Devorgilla Bridge would need to be monitored and the removal of material may need to be repeated. The requirement for a CAR licence from SEPA for sediment management is not currently a matter for the Ministers and is not a reason to reject the scheme.

3.128 The council's operational and maintenance arrangements report sets out details of post flood event actions including the clean-up of affected areas. This does not include details of how it intends to deal with the removal of potentially contaminated material. We believe that this matter would, however, be included within the council's normal maintenance regimes and SEPA has raised no concerns relating to that issue. The technical evidence before us does not give us any cause for concern in relation to public health. The need to remove debris left behind by retreating flood water would continue as it does at present.

Cost Benefit Analysis

3.129 The Scottish Government's [Option Appraisal for Flood Risk Management Guidance to Support SEPA and the Responsible Authorities](#) indicates that option appraisal should include consideration of the cost benefit analysis in the interests of best use of public money. The overall value for money of the scheme may be expressed as the ratio of benefits in monetary terms (i.e. the savings from flood damages avoided) compared to its costs. A cost benefit ratio of more than 1:1 means that the economic benefits of a scheme are greater than the costs. The review of the economic appraisal undertaken in this case concluded that the scheme would achieve a cost benefit ratio of 1:1.35.

3.130 Many of the objectors consider that the scheme has been over engineered, that it does not represent good value for money and that a less expensive, more modest scheme, should be pursued. Some also believe that such a standard approach taken to evaluate the cost benefit does not readily apply to the circumstances in Dumfries where flooding is generally short lived and business disruption is not significant. They argue that the estimated damage avoided has been overstated.

3.131 The methodology which has been used to determine the cost benefit ratio of the scheme applied a recognised approach used to demonstrate value for public money which is applied throughout the UK for reasons of consistency. The economic appraisal undertaken on behalf of the council was expertly reviewed by Dr Chatterton who is clearly an eminent expert in the economic appraisal of flood protection schemes. We therefore give weight to his confirmation that the methodology that has been used is correct and that

it complies with the relevant guidance including that issued by the Scottish Government. However, it is important to recognise that the primary focus of the methodology is concern about the effective use of public money. Inevitably, a wide range of standard assumptions have to be made and applied over a long period of time. Small changes to the assumptions can make a big difference to the final conclusion. The use of standard assumptions to ensure the good use of public money should not be confused with a prediction of what will happen.

3.132 The costs associated with an extreme event would be significantly higher than those associated with the regular flooding at Whitesands. We consider that the objectors have underestimated the potential occurrence and impacts of a rare but extreme event and have not anticipated the effect that this has on the calculation of an average annual damage as required by the methodology. The calculations of damages doesn't take into account the resilience measures currently employed by properties at Whitesands, Dr Chatterton explained that this is because those measures make little significance to the overall calculations as they are only effective for lower levels of flooding. As the methodology is used to assess all flood defence schemes in the UK, there is no reason to assume that the estimation of flood damages avoided for Dumfries has been overstated for the purposes of the appraisal

3.133 The evidence submitted by the council did not include a detailed breakdown of all the various assumptions. It also does not appear to include all costs that would be entailed with the scheme including compensation payments, the cost of the recommended works to the river walls and the recommended monitoring. It is not clear if the maintenance estimated extends to the removal of sediment at Devorgilla Bridge and the hard and soft landscaping. However we note that the appraisal is based on the modelling of the water levels excluding any allowance for climate change and that allowing for this would increase the value of damages avoided.

3.134 We acknowledge that the cost figures used were as estimated in 2016. Some objectors have argued that cost estimates keep increasing. It is not unreasonable that over the project development period estimated costs have varied and increased. Revisions in cost estimates as a result of inflation and alterations in design are not uncommon; it is not proof of poor project management. Until a final design and tenders are received costs are never finalised. The cost benefit analysis will only ever be a snapshot in time.

3.135 We recognise that the level of risks in the costs applied in the appraisal process reduces as the project develops. We find no substantive evidence that the use of the contingency figure of 16% is unreasonable. Taking account of the methodology applied and the relationship of the costs and benefits over the lifetime of the scheme we are satisfied that the level of uncertainty over the costs and benefits are such that they are unlikely to significantly alter the overall calculation of the cost benefit ratio. Nevertheless, we recognise that the cost benefit ratio should not be the sole criterion for decisions and that there are wider issues to consider as addressed in other chapters of this report.

3.136 The Scottish Government guidance (both 2011 and 2019) notes that impacts which cannot be valued in monetary terms should always be described, quantified and brought into the appraisal through appraisal summary tables and should not be ignored simply because they are difficult to quantify or value in monetary terms. The option appraisal guidance advises that obstructions to views should be treated as costs; but only where these dis-benefits are likely to be significant and where there are significant differences of

impact between different options. In term of such impacts the economic appraisal included a figure of just over £1 million for intangible benefits. This figure relates to the damages avoided such as damage to the transport infrastructure, clean up and emergency costs. Dr Chatterton did not find any fault in the appraisal in this respect. However the appraisal does not include a detailed assessment or explanation of the figures used for the intangible costs and benefits. In addition no assessment has been made of any costs associated with visual impact which many of the objectors consider to be significant in this case.

3.137 Taking all of the above into account we consider that the evidence supports the council's conclusion that the scheme meets the required cost benefit ratio. In that case we consider that it is reasonable to conclude that the scheme has not been over-engineered and that a more modest scheme, offering a lower level of protection, is unlikely to represent best use of public money. We have no reason to doubt the calculation of the cost benefit ratio, however, we were not supplied with full details of how the costs were calculated and have therefore taken them at face value. We consider it likely that the costs used in the calculations would, in reality, increase before the scheme would be completed. As there has been no independent verification of the council's figures we recommend that Ministers review the council's cost benefit analysis to satisfy themselves that the scheme represents value for the use of public money.

Water Drainage Infrastructure

3.138 A number of objectors have questioned whether the design relating to the sewer system and surface water storage provision are adequate to resolve flooding from the drainage infrastructure and contend that there is no commitment from Scottish Water to the expenditure required.

3.139 Scottish Water has confirmed that it has been involved in the development and design of the proposed scheme and has not objected to the flood protection scheme. It has noted that following completion of the work the sewers and ancillary equipment would be maintained by them. We have no reason to conclude that the scheme, including the surface water storage, has been not been designed to resolve flooding from the drainage infrastructure. It is inconceivable to us that Scottish Water would allow changes to its system that would be detrimental to its operation. Scottish Water has a duty to provide and maintain a sewer system within certain statutory parameters, we see no reason to conclude that it would not fulfil its duty to do so. The discussions between the council and Scottish Water around funding are not directly relevant to Ministers decision as to whether to confirm the proposed scheme.

3.140 In terms of any potential flooding on the town centre side of the scheme we note that the bund is designed to prevent seepage to and from river and conduits on the town side would allow water to drain to but not from the river.

3.141 We are content that the level of detail provided is sufficient for us to consider the concerns raised relating to water drainage infrastructure. The [Surface Water Drainage Strategy](#) (Annex M) analysed the interface between the scheme and Scottish Water's infrastructure and included detailed analysis of the interaction with the culverted watercourses and the river. We are satisfied that the scheme would not have an adverse effect on Scottish Water infrastructure. We consider that the reduction of pluvial flooding, including the surcharging of the culverted courses, that presently contribute to flooding at Whitesands would be a significant benefit. We note the comments made in relation to the

need for further investigation of the underground watercourses. The council has advised that additional investigative work remains to be undertaken. There is no technical evidence that indicates that further investigation of those watercourses is required at the current stage. This would not preclude the council or Scottish Water from undertaking any further studies that they consider may be required in due course.

Other Matters

3.142 We note the suggestions that flood water could be diverted away from the town by taking it out of the river upstream or that the alignment of the Caul should be altered. These options were not among those considered by the council and we have no detailed evidence to support either proposal. We can only imagine that a series of water gates and a new water channel would be expensive. We do, however, note that although the Hydromorphology Assessment indicates that due to the angle of the Caul, river flows will always be directed onto the left hand river wall, it has a significant controlling effect stabilising the river channel. We also noted the request that the scheme should include a barrier along Welldale to prevent the access to residential properties from flooding. The scheme is designed to protect the residential properties at that location, we can understand the request for the road also to be protected. We are content that the council has detailed knowledge of flooding in and around the Whitesands area and we believe that, in designing the scheme, it is likely to have carefully considered flooding at Welldale. We have no technical evidence that would allow us to consider whether the scheme could or should be altered to provide additional protection at Welldale. We must therefore consider the scheme as proposed.

3.143 We agree that the design of the scheme would prevent access to parts of Whitesands during flooding, however this would mostly relate to the area between the river and the barrier. We accept that access may be restricted for a period prior to a predicted flood, however we do not find that to be unreasonable. As the scheme would reduce flooding of the road and surrounding areas we are satisfied that, overall, it would improve access to the Whitesands area.

3.144 The concerns raised relating to safety and security issues could to some extent be addressed in the detailed design of the scheme through the incorporation of appropriate lighting, CCTV and the design and specification of the landscaping works. The council has indicated that there presently is CCTV at Whitesands. Such measures could not be expected to prevent accidents or all incidents of anti-social behaviour.

3.145 We accept that the current access to Devorgilla Bridge from the western side is steep and not ideal for people in wheelchairs. However, the removal of the existing steps and formation of a ramp on the eastern side must improve access. Ramped access is not only beneficial for people in wheelchairs. We consider the visual and heritage impacts of this aspect of the scheme in chapter 4.

3.146 We understand the concerns raised regarding the potential impacts of the design of the termination point of the scheme on the existing retaining wall and banking below the properties at Grant Court. This is a specific technical matter which we consider that the council would address in the final detailed designs.

3.147 We note the concerns regarding the adequacy of the professional indemnity insurance of Mouchel. We consider that this is a contractual matter between that company and the council and is not relevant to either our or Ministers consideration of the scheme.

3.148 Many of the objectors believe that the cost of the scheme is unjustified and that the money would be better spent on other things. We have already addressed the need for the scheme. The decision by the council to spend money on this scheme, or any other flood protection measures, and not on other things is not a matter that is relevant in our or Ministers consideration of the scheme. Similarly the issues relating to Scottish Government grant funding are a separate matter.

Overall Conclusions

3.149 The hydraulic modelling has been developed over many years by recognised specialists and has been accepted by SEPA as the best available evidence. We are satisfied that it provides the only suitable basis for considering the scheme. The modelling indicates that the scheme would meet the objective of reducing flooding at Whitesands. The model demonstrates that there should be no increase in up or downstream flooding so far as current understanding can predict.

3.150 We consider it has been demonstrated that, technically, the scheme is feasible and is not a disproportionate response to address flooding at Whitesands. Even if other options would be viable the option appraisal process has not highlighted any obviously superior technical option. Although other options have been put forward there are none that are so obviously superior that lead us to question the scheme proposed.

3.151 The scheme would be reliant on an as yet unquantified amount of maintenance work, this would require a significant ongoing commitment from the council throughout its lifespan and should not be underestimated.

3.152 While we have no reason to doubt the council's revised cost benefit analysis we note that there has been no independent verification. Any such assessment is sensitive to the assumptions used and the ratio is less than the council initially thought. Ministers may wish to commission their own independent assessment if proving value for money is a determining consideration before confirming the scheme.

CHAPTER 4 Visual and Heritage Impacts

Introduction

4.1 This chapter of our report considers the parties' position in relation to the visual and heritage impacts of the scheme. At the pre inquiry meeting it was agreed that the inquiry sessions on this topic would consider design and materials, impacts on listed buildings, the Devorgilla Bridge, the conservation area and also townscape and visual impacts.

4.2 Chapter 12 of the ES deals with townscape and visual impact assessment and chapter 13 deals with material assets including built and archaeological heritage. A Heritage Impact Assessment is contained within the appendices to the ES. The position of [Historic Environment Scotland](#) is set out in its hearing statement and accompanying documents.

Save Our Sands

4.3 The position is set out in the original objections from the group and John Dowson, the inquiry statement and closing submissions and also in the precognitions of [John Dowson](#) and [Felix Waterhouse](#) who participated on behalf of the group.

John Dowson

4.4 The scheme would result in the loss of the historic views of the River Nith and Devorgilla Bridge and would have a detrimental impact on the historic environment. It does not recognise the historic importance of the function of the Whitesands particularly with regard to its use as a transport hub. The raised walkway would be an unnatural feature in this historic beach location. Whitesands is a designated Archaeological Sensitive Area and still forms an essential component of the medieval town. The river should not be separated from the town. The scheme would not integrate with the surrounding area and pays no regard to the conservation area status of Whitesands and the wider area.

4.5 The impacts on Devorgilla Bridge are contrary to HES Policy Statement (2016) paragraphs 3.16 and 3.19 as the works are not the minimum level of intervention consistent with conserving a scheduled monument, are not essential and would not provide public benefits of national importance. Paragraph 3.19 indicates that extensive intervention would only be allowed where it is clearly necessary to secure the longer-term preservation of the monument, or where it would clearly generate public benefits of national importance which outweigh the impact on the national cultural significance of the monument. The scheme should therefore not receive consent particularly when a better alternative is available. HES has only been consulted on the proposed scheme not on other options.

4.6 The magnitude of effects on Devorgilla Bridge stated in the ES as slight and not significant is not accepted. The setting of the bridge is not dominated by toilets, cars and buses, these have little impact on its setting; the scheme would ruin its setting. The impact on the bridge is unacceptable and unnecessary. The height and materials of the barrier, including steel and glass, are inappropriate in a conservation area and insensitive to the historic and natural materials nearby.

4.7 Detailed designs are not available to show how the new ramp and barrier would interact with the historic stonework of Devorgilla Bridge. The ramp onto the bridge is not a

required design component; universal access is not an essential requirement of a flood protection scheme. There is much case law in regard to the Disability Discrimination Act that ramps being introduced into Scheduled Monuments are not 'reasonable adjustments.' This is particularly evident where alternative means of access are available for disabled people. In this case two other accessible bridges are within close proximity. The western side of the bridge is unsuitable for disabled access and cannot be made compliant with that Act. The scheme does not secure the longer term preservation of the monument, it is likely to place it in greater jeopardy. No guarantees have been given regarding the safety of the bridge.

4.8 The scheme is contrary to Dumfries and Galloway Local Development Plan (2014) Policy OP1 as it would not protect and enhance the character, appearance and setting of the Whitesands historic environment and is unsympathetic to surrounding land uses, buildings and features. It is contrary to Policy OP2 as the scheme would not relate well to the scale, density, massing, character, appearance and materials of the surrounding area and would not respect the important physical, historic and landscape features of the site and its vicinity. It is contrary to Policy HE2 as it would not preserve or enhance the character and appearance of the conservation area. It is contrary to Policy HE3 as it would not protect significant historic assets, in particular Devorgilla Bridge and its historic setting. It is contrary to Policy HE4 as it would not safeguard the character, archaeological interest and setting of Devorgilla Bridge.

4.9 The scheme would bring massive change to the river and surrounding area and would have a detrimental effect on visual amenity. The conclusion that the loss of views would not be significant is not correct. Although Whitesands is well used for parking there is permeability through the area allowing visibility of the river and the views are quite generous in some locations. The bund would obscure views of the river, all that would be visible through the glass panels would be the tops of trees on the other side. A less intrusive option should be pursued rather than the proposed permanent wall at Dock Park. The provision of an additional sixty parking spaces at Greensands would destroy this green riverside space. Such insensitive development is contrary to the conservation area status of that area. There is no evidence that the scheme adheres to Scottish Government policy on place-making; without the previous public realm improvements, that vision has gone.

4.10 Other less intrusive designs are available which would tackle this issue much more sensitively. Most people favour a scheme which would not interfere with river views and have little or no impact on Devorgilla Bridge. A permanent barrier that obscures views for 99% of the time is not necessary. The council has sacrificed river views to obtain 80% grant funding.

Felix Waterhouse

4.11 The Whitesands, was historically and is today, a flat, empty space in the middle of the town its very lack of trees and raised walkways and grass were what shaped it and its historic uses. The proposal to create green space is not necessarily a good thing, the use of the space is more important. The scheme is dominated by hard landscaping with a drab arrangement of grass, paths, benches, bins and unnatural flower beds. The scheme would not be easy to maintain and would require a regime of management and maintenance that is unrealistic in a time of austerity budgeting and given the council's record in relation to delivery of major projects and the condition of existing open space. Unless the proposed trees are well maintained they would increasingly screen and block the intervisibility

between the town and the river. The scheme would diminish the role and place of the river in the townscape of Dumfries. It would not create an enhanced environment for the Robert Burns Centre, the Caul and Devorgilla Bridge. The scheme would not create a quality space, it would provide little flexibility in future use and would compromise the ability of Whitesands to host organised or informal events. It is not a good example of waterside regeneration.

4.12 The treatment of Devorgilla Bridge is not in any way fitting or suitable. The proposed landscaping is a cheap, off the shelf scheme lacking in imagination and vision. It does not demonstrate care and consideration for one of the most unique town centre sites in Scotland and fails to pay due respect to the historic context of the Whitesands. The scheme is also out of keeping with one of Scotland's few pedestrian suspension bridges and adjacent Victorian terrace and older cottage. The scheme downplays the role and visual importance of the river to the town centre and people's experience of Dumfries.

Other Parties

Oliver Mundell MSP

4.13 A scheme which focuses on the history of the Nith and that is in keeping with the important buildings, bridges and monuments in the area would be more appropriate than the modern design proposed. A number of the concerns raised could be avoided by relocating the scheme potentially on the other side of the road at Whitesands.

Written Submissions from Objectors

4.14 Many of the written objections advanced similar arguments to those parties who were heard orally, those individual objections are therefore not summarised separately. The majority raised the following issues:

- The special character and heritage of Whitesands and its relationship to the town should be protected. The scheme would adversely affect the character of this sensitive, historic area.
- The height, width and length of the scheme are unacceptable, it would form a huge obstruction.
- The proposed earth bund would be unattractive and is inappropriate for this historic setting.
- The impacts on Devorgilla Bridge are understated.
- The ramp at Devorgilla Bridge is inappropriate, out of keeping and unnecessary.
- The scheme may damage the integrity and fabric of the bridge.
- The effects on the setting of Devorgilla Bridge are inappropriate and unsympathetic.
- The scheme would result in loss of the views of the river from the town and significant change to the views along Whitesands from both sides of the river. The current views of the river, Devorgilla Bridge and the Caul are iconic and are the

town's most valuable asset and a much loved part of its heritage. People are attracted to enjoy the view even in wet weather from their cars parked at the Whitesands, the scheme would not allow for that. The removal of the riverside parking disadvantages the ability of the elderly and disabled to enjoy this area.

- The view from Devorgilla Bridge looking over the "Sands", which gives the impression of a bustling thriving town, full of life and action would be lost.
- The proposed landscaping does not make up for the loss of the river views.
- Loss of the river views would devalue properties.
- Insufficient consideration has been given to alternatives that would reduce the impacts such as siting the barrier closer to the shops.
- The scheme would have an adverse effect on the character and appearance of the entrance to Dock Park.
- The materials are inappropriate for this location. The glass panels are unlikely to remain clear and unobscured. The scheme would quickly become unsightly.
- The council has not sought consent from HES and that might not be granted.

4.15 **Morag MacDonald** (Objector No 185) did not participate in the inquiry session on this topic but in her written submissions she commented that the height of the majority of car windows are less than the 1.4 metres high embankment. Occupants of cars and buses would no longer be able to enjoy views of the river, views from ground floor shops and properties may also be obscured as they are depicted as being at the same level as the bund.

4.16 **Ms P. Coles** (No 151) Requests that consideration be given to additional tree planting to conceal the newspaper offices from the Buccleuch Street Bridge.

Historic Environment Scotland

4.17 HES is not a statutory consultee under the 2010 Regulations or under the 2009 Act; it has therefore not been formally consulted on the proposed scheme. However it has provided advice to the council in relation to the development of the scheme, the Whitesands Masterplan and the Strategic Environmental Assessment report. The letters of [12 May](#) and [19 December 2016](#) provide its comments on the revised proposals, the draft Heritage Impact Assessment and Townscape and Visual Assessment and in relation to the requirement for Scheduled Monument Consent for Devorgilla Bridge (also known as Dumfries Old Bridge).

4.18 It notes that the present appearance of Devorgilla Bridge represents a long history of change. The current bridge was constructed in the 17th century on the location of a 13th century predecessor and probably contains fabric from the intervening period. In 1794 three of the arches were demolished to widen the street known as Whitesands and the stepped access was formed marking the change from a road to a foot bridge.

4.19 The setting of the bridge contributes to its nationally important cultural significance and it is clearly visible from a substantial area of the riverbank and surrounding streets. A number of these views accentuate the relationship between the bridge and parts of the town. Views from the west end of the bridge across its span towards Whitesands allow an understanding of how the bridge relates to the medieval and modern burgh. That relationship is reinforced when crossing the bridge in either direction. The glimpses of the bridge from Friars' Vennel, the major medieval approach to the bridge from the burgh, also reinforce this relationship. Some of these views are more sensitive to change than others. In particular, views to and from the bridge from the riverbanks and from the immediate west and east ends contribute a great deal to the cultural significance of the bridge.

4.20 In the earlier and provisional advice given in the letter of 12 May 2016 it was noted that the removal of the public toilets and the replacement by the embankment would not represent a significant net change in views from the north of Whitesands. The need for the ramped access, and the changes to the fabric and setting of that end of the bridge that would entail, was questioned since the Buccleuch Street Bridge is in close proximity.

4.21 The advice contained in the annex to the letter of 19 December 2016 noted that on balance, it is considered that the options appraisal clearly sets out the balancing exercise that has been undertaken to justify the chosen option. However it advised that further information should accompany the application for Scheduled Monument Consent, including additional cost details of the self-raising barrier options. It advised that the application must include an engineering assessment to demonstrate that the potential increased river flow rates (especially at the unblocked easternmost arch and the adjacent river wall) would be unlikely to affect the future structural stability of the bridge. The engineering assessment should also address how the alternative options considered would have a greater or lesser impact on the fabric of the bridge than the preferred option

4.22 HES agree with much of the assessment of the setting of the bridge and the conclusion that it contributes to the character and appearance of the surrounding area. It is agreed that the removal of the car parking and the adjacent bus stance would constitute an improvement. However, it is not agreed that the immediate setting of the bridge at Whitesands is 'run down'. The buildings at the Whitesands and the truncated modern form of the bridge significantly contribute to an understanding and appreciation of the evolving relationship of the bridge with the town. The views towards the bridge from the areas immediately east and west are also important in defining the setting of the monument. The indicative visualisation from the east does indicate that the ramped access would partly obscure the east end of the bridge. The proposed works would be prominent in these views and would have an adverse impact on the setting of the bridge. While based on the information available, this impact would not be significant, it would be essential that the assessment considers this issue.

4.23 It is concluded that the level of impact on the cultural significance of the monument is not likely to be significant in nature. This conclusion is reached on the basis that the main views towards the bridge from the south would be largely unaffected, that the 18th century nature of the east end could still be understood and appreciated, and that present views of that east end are not of primary importance in the cultural significance of the monument. Although prominent the proposed scheme would not greatly limit the ability to appreciate and understand the relationship of the bridge to the adjacent parts of the burgh. The preferred option would have a lesser visual impact on the bridge than other options that involved construction work.

4.24 However, the works are unlikely to accord with paragraph 3.16 of the Policy Statement (2016) which states that works on scheduled monuments should normally be the minimum level of intervention. Extensive intervention is only allowed where it is clearly necessary to secure the longer-term preservation of the monument, or where it would clearly generate public benefits of national importance which outweigh the impact on the national cultural significance of the monument. Such public benefits may include interventions which make public access to scheduled monuments easier or would produce economic benefits once the works are completed. This would be considered as part of the application for Scheduled Monument Consent.

4.25 An application for Scheduled Monument Consent has not yet been submitted. Consultation is likely to be required with the Ministers on any application as the scheme has the potential to impact on a range of heritage assets in the vicinity.

4.26 It is broadly agreed that the impact on the setting of the listed building at 92 Whitesands/29 Irish Street would not be significant but this should be more fully considered in the final assessment including assessment of the importance of the street level views.

Case for the Council

4.27 The council's position is set out in its [inquiry statement](#) on visual and heritage impacts, in the precognitions of [Susan Irwine](#), [Catherine Kidd](#) and [Graeme Pert](#) and also in its closing submission.

4.28 The Whitesands Masterplan, adopted by the council as supplementary guidance, sets out the council's proposals to regenerate the area. Fundamental to the vision for the area is the formation of the an engineered flood protection bund and elevated walkway which would be accompanied by a series of public realm improvements and heritage led projects including the reduction in the dominance of the area by parked cars. The proposals would respect and would enhance the quality of the sensitive historic townscape. The masterplan recognises the importance of the area to local residents and to tourists.

Heritage Impacts

4.29 The Heritage Impact Assessment (HIA) was undertaken to consider the potential impacts on built heritage assets in the Whitesands area, including the Devorgilla Bridge, listed buildings and Dumfries Conservation Area. The Whitesands area was historically used as a livestock market and as a port with associated uses such as merchants' houses, inns and warehousing. The majority of the area is still open and free from buildings. The assessment concluded that, with suitable mitigation, the scheme would have a neutral effect on the majority of heritage assets.

Impact on Devorgilla Bridge

4.30 The assessment considered Devorgilla Bridge, which has a dual designation as a category A listed building and a scheduled monument, to be a high value asset in terms of its sensitivity. The bridge is considered to be a focal point for the heritage assets associated with the river and its setting contributes to its nationally-important cultural significance. The bridge is visible from a substantial area of the riverbank and several of these views accentuate the relationship of the river with the town. Views southwards to the

river from Whitesands and New Bridge Street and from the eastern end of New Bridge are blocked by the public toilets. The assessment considers that its setting is compromised by the vegetation at the easternmost arch of the bridge, by reclamation and development at Whitesands, including its use for car parking. It also considers that the immediate setting of the bridge is run down.

4.31 The assessment concluded that the effects of the scheme would be adverse but of slight significance. The works would change the appearance of the bridge but would be minimal and reversible. The existing steps date from the early 19th Century and would be buried and preserved in situ, this accords with the conservation principle of reversibility. The earliest parts of the fabric of the bridge, which are the most culturally significant, would not be affected by the alterations and the historic river wall would remain exposed and legible. The works at the eastern end of the bridge would create a narrow linear approach following its historic alignment with the lane to its east. The 17th Century elements would still be understood and appreciated and present views of the east end are not of primary importance in the cultural significance of the bridge. The main views towards the bridge from the south would be largely unaffected.

4.32 The materials proposed respect the historic materials of the bridge whilst also being distinct from the historic fabric, this is in accordance with conservation principles. All new walls would be clad in or built from local red sandstone. In the most visually sensitive areas paving surfaces would be natural stone as would all steps throughout the scheme. The use of glass and aluminium is in keeping with the urban scene and the aluminium demountable panels would only be used during severe flood periods.

4.33 Removal of inappropriate townscape elements such as the toilet block, bus stance and car parking and the sediment and vegetation removal would improve views of the bridge and enhance its character and setting. The alterations would restore universal access to the bridge from the east side.

4.34 In terms of structural integrity the scheme would protect the approaches to the bridge from flooding. The removal of sediment would reduce the water levels and velocity of flow for all but the highest return periods and would reduce the loading on the structure.

Other Listed Buildings

4.35 The Heritage Impact Assessment concluded that the scheme would have no likely significant effects on any listed buildings and structures including the Caul, the Whitesands Suspension Bridge, the New Bridge and St Michael's Bridge. With the exception of Devorgilla Bridge and St Michael's Bridge there would be no direct changes to the physical fabric of listed buildings and structures. There would be no impact on the setting of the listed museum at the western end of Devorgilla Bridge due to its distance from the works and as the orientation of that building gives limited intervisibility with the river and the eastern end of the bridge. The works to St Michael's Bridge are minor and relate to the fixings of the new flood defence wall to the masonry bridge posts. With careful design the impact would be mitigated and the effect on the listed structure would be neutral and not significant.

4.36 The assessment found that the scheme would have a minor impact on the setting of the category A listed building at 92 Whitesands/ 29 Irish Street. The flood wall has the potential to diminish the historic relationship of Whitesands, including the river and former

harbour, with this building. It concluded that the incorporation of glass panels to maintain visibility would result in the effects being slight and not significant.

Conservation Area

4.37 The scheme is located within Dumfries Conservation Area. The [Conservation Area Appraisal](#) identifies the river, the Caul, the riverside and the bridges as key positive aspects of the character of the Whitesands and Riverside to Dockhead and Millgreen Character Area. The setting and architectural quality of Devorgilla Bridge and the other three bridges are noted as being important to the identity of the town and as viewpoints. It notes that the river allows significant and attractive views into and out of the conservation area and that the bridges across the river provide important vantage points. Important views encompassing large stretches of the conservation area are those views over the river from the lower levels such as Whitesands and more especially from the west bank. In terms of townscape the open spaces, mostly associated with the river Nith, are recognised as part of an attractive townscape that justifies its protection and management. Whitesands, Dockpark, Millgreen and Greensands are identified as key public spaces that are important components of the character of the town. It is, however, noted that the extensive car parking at Whitesands compromises the environmental quality of that area. Insensitive alterations and loss of traditional architectural elements have also damaged the character of Whitesands. It notes that further development and change should be carried out sensitively and complement the townscape of the area.

4.38 The Heritage Impact Assessment concluded that the scheme would have no likely significant effects on the character and appearance of the conservation area. The scheme would have slight effects on views within and to the conservation area which would affect its character, in particular the historic connections between Whitesands and the river and views from Whitesands to the river. However this would be offset by the incorporation of the glazed panels and the proposed improvements to the public realm which would enhance the character and appearance of the conservation area. The design of the scheme is simple, modest, restrained and contemporary. The use of high quality materials would be commensurate with the conservation area and the setting of the listed buildings. The well-considered and integrated design would be a good fit for the site and more appropriate than replicating styles from an earlier era.

Archaeology

4.39 Whitesands is designated as an Archaeological Sensitive Area, however neither Whitesands nor Greensands were part of the planned part of the medieval town that was laid out on the ridge above the flood plain. The site of the scheme covers several archaeological zones and features including the former river wall, Dumfries harbour and the buried remains of part of Devorgilla Bridge. Ground disturbance could expose features of archaeological interest.

4.40 A written scheme of investigation has been prepared and a watching brief would be undertaken during construction to minimise impacts on and mitigate unavoidable impacts of the scheme on archaeological resources.

Townscape Impacts

4.41 The Townscape and Visual Assessment (TVIA) considered the impacts of the scheme on the surrounding townscape taking into account the character of the site and the visual inter-relationships with the wider area. The key findings in relation to townscape impacts are as follows:

- The sensitivity of receptors at Greensands is high given that it is part of the designated Medieval Town. Once operational the scheme would have minor beneficial effects as a result of the proposed improvements to the car parking, national cycle route and the tree and hedge planting. Only the area around the newspaper office would experience minor adverse effects due to its enclosure by the flood defence wall. Overall the significance of the townscape impacts would be minimal. The TVIA undertaken in 2014 also reached the conclusion that there would be a minor beneficial effect at this location.
- The sensitivity of receptors at Whitesands is high given that it is part of the designated medieval town, the number of listed buildings and the dramatic quality of the River Nith, particularly with respect to the Caul. During construction works the effects would be major (significant) and adverse. Once operational the effects would be moderate beneficial due to the attractive public realm that would be created along the river. The assessment indicates that the scheme would retain the linear layout of this area. From the walkway the key landscape components would be able to be appreciated and there would be enhanced views of key town landmarks. The removal of car parking would create public realm space and the road and parking would no longer dominate this location. The topography of the town is varied and could accommodate some change including the scale and height of the raised walkway which would generally be of a height between 1.15 and 1.25 metres. The effects of the scheme at this location would be moderate beneficial. The 2014 assessment concluded that effects on completion would be major adverse. At that time the scheme would have resulted in physical and visual severance of the town from the river. It noted that, overall, the proposals remain essentially the same at this location.
- The sensitivity of receptors at Dockhead is high as it is within the conservation area and includes the Suspension Bridge and St Michael's Bridge, which are both category B listed buildings, and due to the townscape relationship with the river. The effects during construction would be moderate adverse. Once operational the effects would be minor beneficial due to the improvements to the public realm. The 2014 assessment also concluded that the significance of the effects would have been minor beneficial. The scheme remains mostly unaltered at this location.
- The sensitivity of receptors at Dock Park is high due to this being the town's oldest park and its contrast with the busy urban environment at Whitesands and Dockhead. During construction effects would be moderate adverse. On completion the effects would be minor adverse. Generally the height of the defences would be 2 metres, sections of glass panels would ensure visual connection with the park and the relationship of the river with the footway would be maintained. The 2014 assessment concluded that the significance of effects would have been moderate adverse as the flood wall would create severance of the park from the river at the

entrance off St Michael's Road. The current scheme retains an open aspect to the footpath and cycle path with the wall repositioned along the river side of the car park.

- The sensitivity of receptors at Welldale is high as it has an attractive riverside character and the two category B listed bridges are part of its townscape character. During construction the effects would be major adverse. On completion the effects would be moderate adverse. It is considered that the significance of the effects would be negligible. Only two pairs of semi-detached residential properties would require the protection of a defence wall, the relationship of other properties with the river would not be affected and there would be no significant change to the character of the area. The 2014 assessment concluded that the significance of the effects would be major adverse as the bund and retaining walls would have created a significant degree of severance with the river and significantly impacted upon the riverside locale of the properties in the area. The current scheme addresses those impacts.

Visual Impacts

4.42 The assessment of visual impacts reflects the different types of receptors and selected a representative range of viewpoints within the study area. It included consideration of the impacts on views of the river from residential and business properties and for pedestrians and vehicle borne receptors as experienced at different locations.

4.43 The key findings of the visual assessment in relation to effects on completion of the scheme are as follows:

- The sensitivity of receptors at locations in Greensands was considered to be low for passing travellers and high for residents. The magnitude of effects would be low for all of the visual receptors considered and the effects would be mostly minor to negligible significance. Some residents would experience minor adverse effects others would experience minor beneficial effects. The 2014 assessment concluded that effects would be medium and of moderate significance at the newspaper office elsewhere they would mostly be of low magnitude and negligible to minor significance.
- At locations around Whitesands the sensitivity of receptors was considered to mostly be medium to high but was low for travelling receptors as views are in passing. The effects on residential receptors on the west bank of the river would be minor beneficial, views of the river would be retained, the toilet block would be removed and there would be screening of the road and parking. The businesses at Whitesands would experience a permanent reduction in views to the river but the views are presently obscured by parking and the toilet block. Views from street level would be possible through the glass walls on top of the raised walkway. The effects would therefore be minor beneficial. The effects on leisure and recreational receptors and travelling receptors would be minor adverse except at the N7 National Cycle Route where there would be minor to moderate beneficial effects. Overall the effects at Whitesands would be moderate beneficial. Despite the connection with the river being reduced there would be an improved environment through high quality public realm and improved townscape relationships with the river from the raised walkway. Although some views would be curtailed by the flood defences this would not be significant and no worse than the current restrictions on views caused by

parked cars. The proposed removal of the majority of the car parking would improve the streetscape. The 2014 assessment predicted moderate adverse effects due to restrictions on views towards the river.

- The sensitivity of receptors at locations at Dockhead was considered to be medium to high. The effects on residential receptors would be minor adverse, views of the scheme would be within the views of travelling receptors but would be in passing and would not detract from available views of the river. There would be minor beneficial effects at the cycle route as it would benefit from an improved riverside setting. The effects in the 2014 assessment were the same apart from at the cycleway where they had been predicted to be of medium magnitude and moderate significance.
- The sensitivity of residential receptors at Dock Park and at the cycle route was considered to be high and medium at the pizzeria restaurant and at St Michael's Bridge. Effects would be minor adverse for all receptors. The most significant changes would be localised affecting only the park entrance. Views of the river from the car park would be curtailed. It was considered that the wall would not form a significant element in views of the park from residential properties and that users of the park would still enjoy views of the river. The effects in the 2014 assessment were mostly the same with the exception of leisure and recreational receptors at the park and users of the cycle route where they had been predicted to be of medium magnitude and moderate significance.
- The sensitivity of receptors at Welldale was considered to be high with the exception of the receptors on Suspension Brae. Although there would be impacts on views of the river from front gardens and ground floor rooms the effects on residential receptors was predicted to be negligible. Effects on other receptors were predicted to be minor adverse. Principal views of the river would still be enjoyed with minimal visual impact. Overall the effects at Welldale would be negligible, this is an improvement from the 2014 assessment which predicted adverse effects of major significance at Millgreen Cottage, Kenmure Terrace and Welldale and medium effects of moderate significance at the Suspension Bridge.

4.44 The visual assessment does conclude that the scheme would result in some restriction and modification to views, the degree of loss depends on the location. At Whitesands a reduction in clear views of the river would be experienced from a number of businesses, pedestrians and persons travelling by car. However existing views are significantly restricted by traffic and parked cars. For those receptors travelling north to south in cars the river is barely perceptible and the sensitivity of travelling receptors at Whitesands is considered to be low. The use of glass panels would allow views through to the river from road level and from streets leading down from the town centre. The height differential between the back of the Whitesands footway and the solid part of the barrier would always be less than 1.4 metres, this would allow intervisibility through the glass panels. The removal of the public toilets would improve views from businesses at 1 to 4 Whitesands. The raised walkway would provide improved views and would allow the relationship between the town and the river to be maintained. The existing riverside esplanade walkway and railings would be retained. Pedestrians and cyclists on the riverside walkway would experience no loss of views. Views from upper floor residential properties would change but river views would remain. At Dock Park there would be partial loss of views, however some views would be maintained through the sections of glass proposed. Views towards the town centre from the west side of the river would be improved

as the scheme would screen the busy road and traffic but allow views of the town centre to be maintained. It has been designed to address the imbalance between vehicles and pedestrians, create a green corridor and provide new places for riverside activities within this part of the town centre.

4.45 The assessments identified no significant adverse effects to any townscape or visual receptors on completion of the project. The majority of receptors would experience negligible or minor adverse effects and for a number of receptors the effects would be beneficial.

4.46 The scheme as now proposed addresses townscape and visual concerns raised at earlier stages in the design process. The introduction of the glass panels is an appropriate response to the desire to retain the visual link between the river and the town. While some views of the river would be curtailed by the barrier these would not be significant and at present views are obscured by the significant number of parked cars. The scheme minimises potential adverse impacts on views and in some areas views of the river would be enhanced.

Council's Conclusions

4.47 The potential conflict between maximising flood protection and impacts upon built heritage has been recognised. The scheme has been prepared taking the advice of HES into account and its letter of December 2016 indicates general support for the approach adopted. In particular HES concludes that the impacts on Devorgilla Bridge and the A listed building at 92 Whitesands/29 Irish Street would be unlikely to be significant.

4.48 The requirement for Listed Building Consent and Scheduled Monument Consent are separate processes that would be determined by HES. The scheme does not require to include the level of detail that would be required to secure those consents. The design approach is consistent with paragraphs 3.16 to 3.19 of HES Policy Statement (2016) in relation to Scheduled Monument Consent.

4.49 It is acknowledged that the scheme would have an impact on views. The objectors have, however, overestimated the extent and magnitude of the changes to views. The scheme would not have the impacts anticipated by objectors, particularly in relation to the status quo. The riverside area of Dumfries and the setting of Devorgilla Bridge are diminished due to the domination of car parking, bus stances and turning areas and the public toilets. The scheme aims to enhance the environment of this area.

4.50 The scheme provides a well-considered and balanced approach to the challenges of the site. Best endeavours have been used to minimise visual impacts. A scheme set further back from the river would not be practical and would not allow the incorporation of the landscape improvements proposed. Overall the scheme would result in no significant adverse townscape or visual impacts. It would improve the streetscape and character of Whitesands and Dock Park and provide an improved riverside environment which would be beneficial for local residents and tourists. It is considered to be the most appropriate means of providing the required level of flood protection.

Reporters' Conclusions

4.51 As is required by the relevant regulations the proposed flood protection scheme is accompanied by an environmental impact assessment. In turn, this includes a heritage impact assessment as an appendix and a townscape and visual assessment in chapter 12 of the ES. These assessments are separate but are closely related. They have adopted widely recognised methodology which has particular steps and defined meanings. The methodology followed for each of the three assessments is set out in detail in the ES. In summary they combine the sensitivities of receptors (heritage assets or views) with the magnitude of changes experienced in order to identify significant environmental effects that the scheme may cause. Whether or not an impact is significant is a separate matter as to whether any impact is unacceptable. What is considered to be "significant" in terms of the respective methodologies is not necessarily how the word "significant" is used in everyday language.

4.52 In carrying out these assessments, the council's assessors "traded off" what they considered were beneficial changes against changes they considered to be adverse. It has to be recognised that this relies on a series of professional judgements, many of which are subjective. Ministers are not bound to accept the opinion of the council's assessors. However, by following a methodology and setting this out in the ES, it is intended to help the Ministers determine whether the impacts of the proposal are acceptable or unacceptable.

4.53 The overall conclusions from these assessments was that there would be no significant effects on heritage assets, the townscape or views. Many of the objectors cannot accept this conclusion, in particular the degree of change to the Whitesands area is considered unacceptable and unjustified. The dispute between the council and objectors can be explained by the logic of the council's assessment methodology and different aesthetic judgements as to whether the bund is an unnecessary and unnatural intrusion or a visual improvement to the public realm.

Heritage Impact Assessment

4.54 Legislation and Scottish Government policy identifies various types of heritage assets where any proposed changes should be carefully considered. This relates to both direct changes and changes to setting. The principles for considering change are set out in SPP, HES Policy Statement (at the time of the inquiry) and the adopted local development plan. In May 2019, HES published updated guidance in Historic Environment Policy for Scotland. However, this updated guidance does not contain any material changes which would alter our findings on heritage and visual matters. Fundamental to both sets of HES guidance is that decisions affecting a historic asset should be informed by an understanding of its cultural significance. Both focus on avoiding or minimising adverse impact. Both also recognise that change should be managed rather than prevented but should be managed in a way that protects the historic environment, this reflects the position in SPP.

4.55 The heritage impact assessment identifies the relevant heritage assets as Devorgilla Bridge, Dumfries Conservation Area, listed buildings and archaeology, these are considered in turn below.

Devorgilla Bridge

4.56 There is no dispute that the proposed scheme would have direct impacts on Devorgilla Bridge which is both a scheduled monument and a category A listed building. These include:

- A new ramped approach to the eastern end of the bridge.
- A new flood wall radiating from the barrel piers at the end of the bridge.
- A new handrail
- Removal of sedimentation at the two eastern most arches of the bridge.

4.57 There is also no dispute that the formation of a new bridge access and the flood defences, particularly across Whitesands, would impact on the setting of the bridge and reduce visibility of the bridge from certain areas.

4.58 The assessment considered that the bridge and its setting have a high sensitivity reflecting its statutory designations. The magnitude of change was considered to be minor. In the assessment, minor is defined as, *“material changes to key elements such that the asset is slightly altered. Slight changes to key aspects of the setting of the asset that affect the significance or character of the asset. Changes to few key historic townscape elements resulting in limited changes to historic character and appearance.”* This leads to an overall finding of a slight (adverse) effect which is not considered to be significant for the purposes of an environmental impact assessment.

4.59 Many objectors consider that this understates the impacts on the bridge. However, for the impact to be significant the magnitude of change would have to be considered to be moderate. Moderate is defined as, *“material changes to many key elements of the asset so that it is clearly modified. Considerable changes to key aspects of the setting of the asset that affect the significance or character of the asset. Changes to many key historic townscape elements resulting in moderate changes to historic character and appearance.”* We consider that a minor magnitude of change is more appropriate than a moderate magnitude of change for the reasons set out in the following paragraphs.

4.60 The physical changes to the bridge are small. The steps would be buried and not removed, this accords with the principle of avoiding destructive alterations. The direct works are restricted to more recent parts of the structure leaving the earliest parts intact.

4.61 The historic photographs submitted in evidence show the bridge in a more open setting with its relationship to the riverside and buildings at Whitesands more apparent than presently exists. We agree that modern features of the streetscape including car parking, bus shelters and street furniture have altered its setting. The scheme would interrupt views of the bridge in association with the town but we find that this would not be to an extent that would significantly affect the ability to understand and appreciate the cultural significance of this historic asset or its setting; the advice from HES supports this view.

4.62 The best views of the bridge are obtained from the riverside walkway, those views would still be available if the scheme was implemented. Existing elevated views from the bridge would also remain and views of the bridge from the proposed raised walkway would

be created. The scheme would alter views of the bridge in association with the wider townscape when viewed from the western side of the river. However its relationship with the town and its historic alignment with the lane to the east would still be able to be understood and appreciated.

4.63 We can understand the concerns of many of the objectors regarding the conclusions of the heritage assessment in terms of the impact on the setting of Devorgilla Bridge. We agree that the bridge and Caul are important heritage assets and it is fair to describe the views of them as “iconic” views of Dumfries. The scheme would affect those views to some extent, particularly from Whitesands. We find that the setting of the bridge would profoundly change. Whether this is considered an adverse or beneficial change depends on an aesthetic judgement which will vary from individual to individual.

4.64 Some objectors argued that there is no need for a ramped access to the bridge and in any event, because the access to the western side is so steep, full wheelchair access would be unachievable. The steps, whilst long standing are not original. A ramped access has benefits for a wider set of users not just people in wheel chairs. In any event, if that aspect of the scheme is considered to be unacceptable it would not be permitted by the Scheduled Monument Consent process.

4.65 In chapter 3 we found that there is no technical evidence that suggests the scheme would have an adverse impact on the structural integrity of the bridge. We also accept that the scheme would reduce the loading upon the bridge during flood conditions and we concluded that monitoring of the effect on scour at the foundations may be addressed by the council’s statutory monitoring and maintenance arrangements.

4.66 The council has consulted with HES during the development of the scheme, if it had any fundamental concerns over the impact of the scheme or the findings of the heritage impact assessment we would expect it would have said so. Although there is disagreement over the potential for HES to grant the required consent this is a separate process and independent of any decision to confirm the scheme or not. If HES ultimately consider the scheme has an unacceptable impact upon Devorgilla Bridge either the scheme would not proceed or would have to be modified.

4.67 Overall, we consider that the assessment for Devorgilla Bridge is fair. There would be adverse impacts but in our judgement the change to the setting would not be significant or unacceptable. In any event, a detailed assessment would be necessary as part of the Scheduled Monument Consent process. We cannot agree that there would be any breach in national or local heritage policies.

Conservation Area

4.68 The Dumfries Conservation Area covers a large part of Dumfries town centre, including Whitesands. The assessment considered the sensitivity of the area to be medium, we consider that this is appropriate for a local designation. It found that the scheme would affect the visual permeability and historic connections between Whitesands and the river. However the existing busy road, car parking and street furniture presently detract from the character of the conservation area. The proposed glass panels would reduce the impact of the scheme at street and walkway levels on important views between the river and the town and with the public realm improvements the scheme would have a

positive effect on the conservation area. It therefore concluded that the effects on the conservation area would be minor and of slight significance.

4.69 Whitesands, Greensands, Dockpark and Millgreen are identified as key public spaces that are important components of the character of the Conservation Area. The scheme, which comprises a landscaped bund across, what is mostly car parking, would inevitably create a barrier between the town centre and river. It would alter the layout of Whitesands, the openness of the area along the riverside and views into and out of the area, particularly those from the town centre side of the scheme, would be reduced. Although the scheme would erode the historical connection between the town and the river, the impacts would be localised to the Whitesands area and would not impact on the character of the wider conservation area.

4.70 Taking these matters into account, as with the assessment for Devorgilla Bridge, we believe that the scheme would have some adverse impacts upon the conservation area but that a minor magnitude of change is fair and in our opinion, the impacts overall, would not reach the threshold of moderate. We do not find that the changes to the character of the conservation area are unacceptable overall.

Listed Buildings

4.71 Within the vicinity of the scheme the heritage impact assessment identified 10 listed buildings (not including Devorgilla Bridge), one category A, five category B and four category C buildings. The assessment only found two buildings where an impact on their settings would be more than negligible, these were Rugmans Hall, 29 Irish Street/ 92 Whitesands (category A) and 32 Whitesands (category C).

4.72 The assessment found that the scheme would impact on some views to and from these two buildings and the historic relationship with the river, Whitesands and in the case of Rugmans Hall the harbour, would be diminished by the flood protection barrier at these locations. It considers that at Rugmans Hall this relationship is currently degraded by the presence of the busy road and that the glass panels would help mitigate the effects. At 32 Whitesands it is considered that the public realm improvements would overall enhance its setting. We agree that the setting is already detrimentally affected to some extent by the proximity of the building to the busy road and parking but the scheme would interrupt the relationship of the listed buildings with the river and would therefore affect their setting. However, we agree that it is fair to describe the magnitude of change as minor rather than moderate and we do not consider that the impacts on these two listed buildings could be considered as unacceptable.

Archaeology

4.73 We agree with the assessment that there would be no significant effects on archaeological interests. There is no evidence that the scheme would adversely affect such assets. We are satisfied that conditions would suitably protect the river walls and any buried remains that might be discovered. The conditions will be addressed in further detail in chapter 8.

4.74 Overall, we conclude that the scheme would have some adverse impacts upon heritage assets. However, assuming that there is a need for a flood defence scheme, we do not consider that such impacts are unacceptable. We therefore find no conflict with the

proposed scheme and the various policies that aim to ensure changes to heritage assets are carefully managed.

Townscape Impacts

4.75 The study area was divided into five townscape receptors (i.e. areas) for the purposes of the assessment. Significant effects were predicted during construction for all study areas. However these effects relate to activities associated with construction and are inevitable for any large scale civil engineering project. They are relatively temporary and can be mitigated to an extent by conditions. We therefore do not consider these effects to be unacceptable.

4.76 Only two of the areas, Whitesands and Welldale had a magnitude of effect of medium. Medium is defined as, *“noticeable changes in the characteristics of the townscape.”* The assessment describes the Whitesands and Welldale areas as being of high sensitivity. At the Welldale area change related to the impact on two houses near the suspension bridge, the overall significance of the effects was therefore concluded to be negligible. On the basis that the townscape impacts are localised we agree with the assessment and find the effects at this location to be acceptable.

4.77 The key concern of most objectors relates to changes to Whitesands. The assessment notes the importance of the wide panoramic views across the river towards the west bank are highly significant to the character of Dumfries and that views from the west bank towards Whitesands are rich and interesting. The assessment accepts that as a result of the scheme the connection between the key townscape components would be less evident from the road but that the adverse effects would be mitigated by the removal of the car parking and the incorporation of the glass panels.

4.78 The assessment considered the townscape changes in Whitesands would be beneficial. A new attractive public realm would be created along the river. The relationship between the town and the river would change but the topography of the town is varied and can accommodate some change, including the scale and height of the raised walkway. The townscape would be able to be appreciated from the raised walkway and would be unchanged from the riverside walkway and cycleway.

4.79 From our observations on site we note that the connection between the medieval town and the river are most apparent when viewed within the open areas around the riverside and Whitesands. The relationship is best appreciated in the mid to long distance views across the area taking in both the strong building line and the riverside. The land along the river and its flood plain from Whitesands towards Dockhead is naturally low lying and level. The land slopes uphill on either side of the river but does not do so until beyond the building line on the town (eastern) side of the river. The scheme would intrude upon those panoramic views and interrupt the connection between the key townscape components eroding the link between the town centre and the river, unless experienced from the raised walkway or riverside esplanade. Views are considered in more detail in the visual impact section below.

4.80 We recognise that the council has attempted a design led approach to the scheme. The Whitesands Masterplan (part of the statutory development plan) is driven by the desire to regenerate and improve the quality of the area and to enhance the sense of place. We consider that it is reasonable to take this into consideration as part of the assessment

methodology. However, whether the bund is considered to be an improvement or an incongruous addition to the townscape is an aesthetic judgement that is likely to vary from individual to individual. In our judgement, the bund would inevitably change the nature of Whitesands as a place, which would be considered significant in the ordinary use of that word. We therefore find that there would be some adverse townscape impacts.

4.81 Overall, in our judgement, whilst Whitesands would profoundly change as a place, this is inevitable if it is accepted that the flood defence scheme is needed. If it is accepted then we believe that any perceived adverse townscape impacts are outweighed by the benefits of improved flood defences.

Visual Impacts

4.82 The visual assessment attempts to identify the changes to views and considered 44 viewpoints across all five of the townscape areas. As with the townscape assessment, the main area of concern for most objectors was Whitesands. The assessment showed that 21 of the 44 viewpoints would experience a high magnitude effect during construction. High being defined as, *“substantial changes in view for a long duration and/or obstruction of a substantial part of views beyond the development. Majority of viewers affected.”* However, high impacts during construction are inevitable for any large scale civil engineering project and would be for a temporary period. We therefore do not consider these to be unacceptable

4.83 The visual assessment found that effects of the scheme, once completed, on receptors at Whitesands would, in the main, be minor and not significant, at three locations including Devorgilla Bridge they would be minor beneficial. It noted that while some views of the river would be lost they are already restricted. The council argues that views on the town centre side of the bund are already reduced due to car parking. The maximum height of the solid bund is no more than the average height of a car and the use of glass would allow some visibility. The assessment concluded that views would, overall, be improved. It is considered that the removal of car parking and the new landscape bund would be beneficial.

4.84 As with the townscape assessment, it is acceptable within the logic of the methodology to take into account what are considered to be visual improvements. However, whether the visual changes are beneficial is an essentially aesthetic judgement that would vary from individual to individual. It is clearly an opinion not shared by many objectors.

4.85 It is apparent to us that views of the river and bridge at Whitesands are an important scenic attraction. The walkway along the riverside has a number of specific viewing places. We heard evidence from local businesses that views of the river and bridge are important to many of their customers. The objectors place a high amount importance on those views.

4.86 We observed that views of the river from Whitesands are location and time sensitive and are not as limited as argued by the council. There are a number of opportunities for both clear and glimpsed views of the river by receptors at Whitesands and car borne travellers, particularly those travelling south to north. We also noted that the amount of parking varies quite significantly and that when the parking areas are less busy there is greater visibility of the river. We would suggest that there is a material difference in perception of a view when there is a solid barrier compared to viewing through parked cars.

4.87 The scheme would result in a reduction in views to pedestrians on the footways at the road and adjacent to the buildings on Whitesands. However, we do not consider that it is fair to say that all views would be lost. Not all the views would be materially altered and the best views of the river and bridge from the esplanade would remain. Anyone choosing to use the raised walkway would have enhanced views.

4.88 We consider that changes to views are an inevitable consequence of building a flood defence barrier across Whitesands. We accept that the council has done what it reasonably can in reducing the impact of the bund given the structure's essential function. We accept that the proposed landscaping and the use of glass would "soften" the visual impact of the bund compared to a wall or similar structure and that glass would allow some views to be maintained. As with the townscape assessment, it is acceptable within the logic of the methodology to take into account visual improvements. However, we recognise that many of the objectors do not consider the public realm works an improvement and that they place great importance on the views that would be affected. It is clear that some views on the town centre side of the bund would be diminished. The relocated bus stops and the new tree planting may also have impact on localised views from some locations, including views of Devorgilla Bridge. We therefore find that there would be some adverse visual impacts.

4.89 We note the objection on the grounds that the loss of river views would reduce the value of an objector's property. The scheme would as noted above inevitably have some impacts on views. We are satisfied, having taken account of the visual impact assessment, that no individual property would, overall, be unacceptably affected.

4.90 Taking account of the above we consider that it is unhelpful to describe many of the visual effects as minor as this fails to capture how we believe many people will perceive the scheme. However, if a need for a flood defence scheme is accepted then we believe that any adverse visual impacts are outweighed by the benefits of improved flood defences.

Overall Conclusions

4.91 The heritage, townscape and visual impact assessments are "tools" to help understand the impacts of the scheme. The methodology offsets the predicted impacts against mitigation, including in this case what are considered to be benefits of the scheme. The conclusions reached found no significant adverse heritage, townscape or visual effects. The methodology adopted is widely used in environmental impact assessments and we have no cause to find fault in the approach used. The parties disagree with the findings of the assessments. We accept that, as the methodology entails subjective judgements, it is legitimate for the objectors to disagree with the weightings applied and we can understand why they disagree with the conclusions reached.

4.92 Overall, we consider that the heritage impact assessment represents a fair assessment of the scheme's impact upon designated heritage assets. There is no dispute that the proposed scheme would have direct impacts on Devorgilla Bridge and alter its setting. HES have taken the view that the works would not have a significant effect on the cultural significance of the bridge. Some of the works in the proposed scheme would also require Scheduled Monument Consent. However, based on the evidence before us, there is no reason to assume that HES has any fundamental concerns that would be unable to be resolved. We also accept that the proposal would result in changes to the character of the

conservation area and the setting of listed buildings. Overall we conclude that there would be some adverse impacts on designated heritage assets however, when balanced against the benefits of improved flood defences, we do not consider that these are unacceptable.

4.93 The main townscape and visual impacts would occur in the Whitesands area. We accept that the proposed scheme would change the nature of Whitesands. The council's contention is that overall this change would result in an improvement, clearly many of the objectors do not agree. Whether the landscape bund is considered an alien feature or a public realm improvement is an aesthetic judgement which varies from individual to individual. It is clear that the connection between the key townscape components would be less evident from the road and that views of the river and Devorgilla Bridge would be reduced. Not all views would change and the best views of the bridge and the river are from the promenade and these would remain. However, there would inevitably be some loss of views and physical and visual separation of the river from the town. We therefore find that there would be some adverse townscape and visual impacts, including effects upon what may be described as iconic views.

4.94 The detailed specifications and future maintenance of various aspects of the scheme, particularly the hard and soft landscaping and the longevity of the glass panels, would have an influence on the appearance of the scheme and its impacts. The predicted effects could vary significantly depending on those matters, particularly at Whitesands. However, this is a matter for the council. We consider that it would not be reasonable to reject the scheme on the premise that the council is incapable of correctly specifying materials and maintaining the scheme.

4.95 The proposed conditions include the requirement for a landscape management plan, this would address the issues relating to new planting and landscape maintenance. We find no justification for requiring additional planting at the newspaper office, as has been requested, as part of that condition. The council may wish to consider incorporating additional planting there if it considers that this would be appropriate.

4.96 It is obviously the clear and strongly held opinion of the majority of the objectors that the character of the area and the views of the river and Devorgilla Bridge are very important to the town. Many of the objectors argue that an alternative scheme with lesser impacts should be pursued. Alternatives may be possible and may have lesser impacts. In chapter 3 we addressed other options and noted that either a low permanent wall or a self -rising barrier would have less townscape and visual impacts. However, we identified other technical and financial difficulties and concluded that no other option is so obviously superior that it leads us to question the proposed scheme. In any event, Ministers can only consider the impacts of the flood defence scheme before them.

4.97 Even if it is accepted that the scheme would have significant townscape and visual impacts these have to be considered against the benefits of enhanced protection from flooding. Overall, assuming that a flood defence scheme is necessary, we do not consider that any of the adverse townscape and visual impacts of the scheme would be unacceptable to the point where it should not be confirmed.

CHAPTER 5 Impacts on Ecology

Introduction

5.1 Chapter 8 of the ES addresses the impacts on flora and fauna and copies of surveys undertaken are included within the appendices at Volume 2. This chapter of our report considers the parties' position in relation to the impacts of the scheme on ecology, including protected species and the Solway Firth Special Area of Conservation (SAC). This topic was not addressed at the inquiry or hearings except in relation to the broader matter of planning conditions which are discussed in detail in chapter 8.

Case for the Objectors

Save Our Sands

5.2 The objection from Save Our Sands is contained within Appendix G of the council's submissions, additional comments are contained within their closing submissions.

5.3 The group's objections may be summarised as opposition to the felling of any trees and that action taken, following survey work, to block potential bat roosts, was unacceptable practice.

Morton Fraser

5.4 As indicated in chapter 1 Morton Fraser made submissions as to the adequacy of the submitted ES in [further written submissions](#) of 7 September 2018 and [closing submissions](#).

5.5 In undertaking its duties under Section 1(1) of the 2009 Act the Ministers and responsible authorities must have regard to environmental impacts. In this case insufficient information has been provided to determine whether the proposed mitigation would have significant impacts on the environment, notably European Protected Species and Habitats.

5.6 The River Nith, its banks, vegetated shingle berm and islands are habitats for otters. The otter survey undertaken is out of date, it does not cover an adequate area and the methodology used was unsatisfactory. The baseline survey is an unreliable basis for assessment of impacts on this species.

5.7 As otters are a European Protected Species and legally protected under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) a licence is required before works to remove the sediment berm at Devorgilla Bridge (mitigation works LM1-4) are commenced. The licence should be determined before the project is consented in accordance with the letter from the chief planner. [Scottish Natural Heritage \(SNH\) Guidance for local authorities on licensing arrangements for European Protected Species](#) requires that before permission is granted the decision maker should be satisfied that the development will not adversely impact on any European Protected Species and that all three tests necessary for the eventual grant of a licence under the Habitats Directive are likely to be satisfied. A licence to remove the sediment berm could not be granted by SNH because in this case the three applicable tests would not be satisfied for the following reasons:

- Satisfactory alternative mitigation exists in the form of local flood defences.

- The reduction in flood risk as a result of those works cannot be considered to be substantial. This reason was also used by the council to discount the self-rising barrier option.
- The removal of the sediment berm would be required repeatedly over the lifetime of the scheme with substantial in-channel disturbance.

5.8 Licences to permit development that might affect otters can only be granted if all three strict licensing tests are met. The council has stated that a licence for dredging is unlikely to be granted due to changes in habitat and environmental damage to species including otters. It also states that a licence for the removal of the gravel islands could not be applied for; such reasoning equally applies to its proposed removal of the sediment berm at Devorgilla Bridge. There are alternatives to the scheme which would avoid unnecessary environmental impacts, both during construction and in operation, notably upon European Protected Species and habitats, and the need for transportation of controlled waste to landfill.

5.9 The scheme would have an adverse impact on the SAC. Sea, river and brook lamprey are all present in the River Nith and are qualifying species of the SAC. Although it is more than 5 kilometres down-stream the SAC is functionally linked to the River Nith. An Appropriate Assessment is required in terms of the EU Habitats Directive to determine whether the silt removal would, as a single operation or repeatedly, have adverse impacts on the integrity of the SAC. The Habitats Appraisal Assessment contained within the ES is incorrect and not sufficiently extensive. It also ignores the cumulative impact of repeated sediment removal over the life of the scheme. There is inadequate evidence to conclude that there would not be an adverse effect on the integrity of the SAC. The project may therefore only proceed if it is imperative and of overriding public interest to grant consent and there are no alternative solutions. Alternative mitigation is available in the form of local flood defences and SEPA has indicated in its letter of [30 March 2017](#) that the reduction in upstream water levels as a result of the sediment removal could not be considered substantial. These two tests therefore cannot be met.

5.10 As indicated in closing submissions, it is reiterated that insufficient information has been provided to determine whether the removal of sediment at Devorgilla Bridge would have materially significant impacts on the environment, notably European Protected Species and habitats. As a minimum a baseline electrofishing survey of the sediment berm should have been undertaken. In terms of otters, Wild Surveys Ltd clearly state that their reports are pre-application scoping surveys and not an Ecological Impact Assessment in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidance.

5.11 The conclusion in the ES that an otter couch is unlikely to be found in the area of the sediment berm is disputed. That area is used by otters as a place of shelter and otters are sighted frequently at the Whitesands and along the River Nith. In terms of impacts on otters a licence would not be granted by SNH as the three tests set out in the Habitats Regulations are unable to be met for the aforementioned reasons.

5.12 The ES does not consider the impacts of repeated sediment removal operations. The conclusion that impacts upon the berm would be negligible ignores the cumulative impact of repeated sediment removal operations. It assumes without any evidence that the condition of the habitat for lamprey and that the lamprey population will not be affected or

that both will recover within a short period. Those works would have the effect of a permanent change and taking a precautionary approach, they are likely to have materially significant impacts on the environment. It is considered that an Appropriate Assessment is required in terms of the EU Habitats Directive for the sediment removal both as a single and a repeated operation. SNH may be satisfied with the removal of sediment as a single, one-off occurrence, however, the written evidence of SNH does not include consideration of the repeated removal of sediment and the cumulative impacts thereof.

5.13 Consideration should be given to direct local flood defences at Nunholm which are within the terms of SPP and the policies of SNH and are certain to have a lower environmental impact.

Other Parties

5.14 Some individual objectors have concerns relating to impacts on protected species and habitats as a result of the proposed works, in particular the sediment removal. Objectors note that wildlife is a major attraction of the river. Others, although objecting to the scheme, believe that wildlife is adaptable, some has only taken up residence recently and will easily relocate. Some note that protected species, including swans and otters have survived previous dredging.

5.15 **Mrs Elizabeth Morrison** (Objector No 2) has concerns about the removal of silt at the east bank of the river. Reference is made to the conclusions of the hydrology report Appendix D (p33) and the requirement for early discussions with SEPA and SNH in relation to impacts on protected species and habitats.

5.16 **Oliver Mundell MSP** (No 297) considers that insufficient studies have been undertaken of the impacts of changes in water flow on wildlife.

5.17 **Mr John Kennedy** (No 330) considers that the council is reliant on unknown and undefined mitigation works that may not be legally permissible under protected species legislation. Noting the potential requirement for protected species licences he points out that the council's published view of this is that such licences would not be granted.

Scottish Natural Heritage

5.18 SNH do not object to the flood protection scheme. Its position is set out in the [consultation responses](#) and [hearing statement](#). It has confirmed that it was consulted on the scoping document and the Environmental Report for the Whitesands Masterplan. It was also consulted on suitable methodology for avoiding impacts from gravel extraction on river lamprey, a qualifying species for the SAC. The consultation response from SNH dated 8 February 2017 states that it is satisfied that the necessary surveys have been undertaken and that appropriate mitigation is proposed to take account of natural heritage interests.

5.19 At the hearing on background and context the representative from SNH stated that there were no concerns regarding any significant effect on the SAC. SNH's view is that there would not be a likely significant effect on the qualifying features of the SAC and therefore no effect on the integrity of the site overall.

Case for the Council

5.20 The proposed scheme does not lie within or adjacent to any designated sites of ecological conservation interest. However within approximately 5 kilometres of the site are the Upper Solway Flats and Marshes which are a Special Protection Area (SPA), a Site of Special Scientific Interest (SSSI) and a RAMSAR site (designated internationally important wetland areas) and the Solway Firth Special SAC. The main ecological receptors that may occur within the vicinity of the scheme are bats, otter, nesting birds, salmon, eel and sea and river lamprey. Sea and river lamprey are qualifying species of the SAC.

5.21 In terms of impacts upon designated habitats the ES notes that construction activities have the potential to cause disturbance to terrestrial habitats and disturbance to terrestrial and aquatic species. No designated sites would be directly affected by the works. Assessment was, however, made in terms of the impacts on sea and river lamprey present within the River Nith in relation to the possible functional linkages with the SAC. This included an outline habitats appraisal at section 8.5.5 of the ES. There is a possibility that removal of sediment at Devorgilla Bridge could disturb lamprey nests; this has the potential to have a slight adverse effect on the SAC. The outline appraisal notes that those works may be considered as very short term (<1 year), are not directly within the SAC and that there will be no impacts on the SAC as a result of the project. An outline mitigation strategy was developed in consultation with SNH. The ES concludes that implementation of the mitigation would ensure that there would only be a slight adverse impact of negligible significance on the integrity of the SAC.

5.22 In terms of impacts on protected species the key findings of the ES are as follows:

Otters: The east bank of the river affected by sediment removal has potential for use as an otter couch. At the time of the survey there were signs of otter only at the area known as the Sandy Opening, however a pre-construction survey would be undertaken. Mitigation of any impacts would involve a European Protected Species Licence from SNH. It is considered that the proposal would satisfy the three associated tests. In particular the Design Justification Report (Mouchel 2016) concludes that there is no viable alternative solution to the removal of sediment at Devorgilla Bridge for mitigating upstream impacts. As the works would be regulated by SNH and SEPA it is considered that the scheme would have no impacts on any otters potentially active in the area.

Bats: At the time of the survey no bats were found to be present. Trees and structures with bat roost potential would be subject to pre-construction survey and if required a licence would be obtained from SNH. Any new lighting installed has the potential for slight minor impacts of negligible significance. Mitigation is proposed in respect of such impacts.

Birds: Nesting birds are regarded as being of international importance and even slight impacts may be highly significant. However mitigation, including pre-construction survey, would result in no impact on nesting birds.

Salmonids and other fish: Salmonid habitat occurs at various locations within the vicinity of the proposed scheme. River and sea lamprey are present throughout the River Nith and suitable spawning habitat occurs at various locations near the scheme. Habitat for eels exists across the area of the scheme. With suitable mitigation, impacts would be of low significance. The assessment concludes that given the plentiful habitats for salmon and lamprey within the Nith the small amount of habitat affected by the proposed sediment

removal would have a small adverse effect of negligible significance on salmon and the conservation status of lamprey in the SAC.

5.23 The ES considered impacts upon habitats of local importance, this included effects on urban trees and riparian habitats. Trees to be removed as part of the scheme would be offset by replacement planting and any potential to enhance local biodiversity would be met. Removal of the sediment berm at Devorgilla Bridge would result in loss of some riverside habitat. However the sediment berm is relatively recently formed and such habitat varies in time and space due to hydro/geomorphological processes. It is concluded that impacts upon habitats of local significance would be of negligible significance.

5.24 In relation to non-native species the ES notes that the removal of sediment at Devorgilla Bridge has the potential to spread invasive or non-native species. Prior to works commencing an invasive species survey and a suitable management plan would be put in place. Given the relatively small scale of the area to be managed, overall any impacts in relation to non-native species would be of negligible significance.

5.25 The mitigation proposed to address ecological impacts includes pre-construction surveys, consultation with SNH to determine whether any mitigation actions require to be licenced and monitoring during construction and restoration activity by an ecological clerk of works (ECoW). Any potential for unexpected or unforeseen residual impacts would also be addressed through appropriate monitoring. It is considered that there would not be any residual effects of significance following effective implementation of the proposed mitigation and strict adherence to best practice on engineering works in or near the water environment.

5.26 In terms of the potential need for a European Protected Species licence, as the scheme seeks to address public safety and promote social and economic regeneration it satisfies the public interests test. The Design Justification report (Mouchel 2016) concludes that removal of the sediment berm is the only viable option for addressing potential increased water levels upstream. Therefore the second test, that there is no satisfactory alternative, is satisfied. The third test requires the maintenance of the population of the species at a favourable conservation status for their natural range. The existence of suitable alternative resting places for otters means that this test is likely to also be met.

5.27 In responding to the further written submissions the council points out that SNH has confirmed in its hearing statement that it is satisfied that the relevant environmental receptors had been considered in the ES and the assessment and mitigation were appropriate to avoid detrimental effects on natural heritage interests. Previous applications for a CAR licence to remove sediment were made for aesthetic reasons. The flood protection reasons for the proposed sediment removal provides a strong justification for a future CAR licence to be granted by SEPA. The presence of protected species was a key factor in ruling out dredging as that option would not reduce flood risk and without justification a licence to carry this out would not be granted.

Reporters' Conclusions on Ecological Impacts

Impact on Solway Firth SAC

5.28 Any development that has the potential to impact upon an SAC must be screened for an Appropriate Assessment, if it will have a 'likely significant effect' on an SAC then an Appropriate Assessment is required.

5.29 As indicated by SNH, the site of the flood protection scheme is approximately 5 kilometres from the Solway Firth SAC, however we acknowledge that the qualifying interests, sea and river lamprey can be functionally linked to the River Nith. The ES finds that there is potential for lamprey nests to be disturbed by the scheme, but concludes that the scheme would have only a slight adverse or negligible significance effect on the integrity of the SAC.

5.30 We note that SNH was consulted at various stages in the development of the scheme and gave consideration to the ES, which incorporates an outline habitats appraisal. In its consultation response on the flood protection scheme dated 8 February 2017 SNH indicated that the project has the potential to impact upon protected sites and species and states that appropriate mitigation is proposed to take account of natural heritage interests. However it did not at any stage indicate that the works would have likely significant effects on the qualifying interests of the SAC or that an Appropriate Assessment would be required. At the hearing session its representative advised that SNH's conclusion was that there would not be a likely significant effect on the qualifying features of the SAC and therefore no adverse effect on the integrity of the SAC overall. As advisers to the Scottish Government on ecological matters with a duty to have regard to the Habitats Directive we consider that weight should be given to its conclusions on that matter.

5.31 We accept that although the proposed scheme is some distance from the SAC it is functionally linked to the River Nith. However, the works to remove the sediment berm relate to a very small part of the river that could theoretically affect the qualifying interests of the SAC. Our attention has not been drawn by any party to any other project that could have an impact. The area affected is tiny in comparison with the overall extent of the SAC and the ES identified that the habitats for salmon and lamprey within the river are plentiful. The works to remove the sediment berm would be temporary, would last a relatively short time and their timing would be undertaken during appropriate windows of opportunity. Sediment management would need a CAR licence and, as such, would be controlled by SEPA in consultation with SNH. Taking all of the evidence into account we conclude that there is no reason to not accept the evidence from SNH and we are satisfied that there would not be a likely significant effect on the qualifying interests of the SAC. That being the case, we are content that an Appropriate Assessment under the Habitat Regulations is not required and that the scheme could proceed with no reasonable likelihood of there being an adverse effect on the integrity the SAC.

Impact on Protected Species and Trees

5.32 The prospect of repeated removal of sediment at Devorgilla Bridge was addressed in chapter 3 where we concluded that the frequency and amount of sediment removal cannot yet be established. We therefore consider that the potential for ecological impacts as a result of such works cannot reasonably be predicted at this point in time. We are satisfied that as this would require a CAR licence it would be a matter for the council to resolve with

SNH as and when any such operations may take place. Consideration of any impacts of such future works would be based on the information which would be available via additional survey work required at that point in time. If repeated sediment removal operations were required in the future an Appropriate Assessment may be needed, however, we consider that this is not currently a matter for the Ministers and is not a reason not to confirm the flood protection scheme.

5.33 The ES includes details of the survey work that has been undertaken and indicates that the principles cited in the CIEEM guidance have been adopted. The Updated Extended Phase 1 Habitat Survey undertaken for the purposes of the flood protection scheme indicated that further surveys for protected species should be undertaken prior to the start of construction works. Where protected species may be present such a recommendation is normal and does not indicate that the surveys undertaken are inadequate.

5.34 Although it is acknowledged within the aforementioned habitat survey that it has some limitations, SNH is satisfied that the necessary surveys have been undertaken and has raised no concerns regarding their methodology or adequacy. The submissions from Morton Fraser do not include evidence that allows us to reach a different conclusion from SNH on the adequacy of the surveys. Although they argue that the surveys are out of date we accept that any surveys are a snap shot in time and, as SNH indicated at the initial hearing, are generally only valid for a period of around six months. There is nothing before us to suggest that there are likely to be any short term changes to the environment in the period before any work would commence that would significantly alter either habitats or the behaviour of protected species. Having considered the evidence we are satisfied that there is no substantive cause to doubt the validity of the surveys utilised in the assessment of ecological impacts.

5.35 The letter from the chief planner referred to by Morton Fraser in paragraph 5.7 above reminds planning authorities that they must satisfy themselves whether a European Protected Species is present on a site rather than addressing this matter by attaching a suspensive condition to a planning permission. In this case we are satisfied that the required surveys have been undertaken and this view is supported by SNH. Pre-commencement surveys would ensure that the mitigation measures would be refined by an updated understanding of the behaviour of any protected species. We are therefore satisfied that the council has suitably addressed the requirement to survey for protected species and that there is no requirement for additional surveys prior to any decision to confirm the scheme.

5.36 The ES concluded that impacts upon protected species and habitats of local significance would be of negligible significance. SNH do not disagree or raise any concerns in relation to those matters. As the Scottish Government's advisors on ecological matters and statutory consultee responsible for advising on issues relevant to protected species and protected areas we attach considerable importance to that advice. We note that SNH would be responsible for issuing a licence under the relevant regulations. No other party has presented evidence that causes us to dispute the findings of the ES in relation to the effects on the SAC, protected species and other ecological interests set out above. We are satisfied that there is no substantive cause to doubt the conclusions of the ES in terms of impacts on ecology.

5.37 Regardless of the above the proposed conditions include the requirement for pre-construction surveys and the implementation of any required mitigation in consultation with SNH. They also include the appointment of an ecological clerk of works and the requirement for a construction and environment management plan, both in consultation with SEPA and SNH. We consider the conditions in further detail in chapter 8. Although at this stage the mitigation strategy is in outline we are satisfied that it has been developed in consultation with SNH. Any detailed mitigation would require to be determined after further survey work and approved in consultation with SNH. The works to the berm would also be subject to a Controlled Activities Regulations (CAR) licence from SEPA. The involvement of SNH and SEPA would add independent scrutiny and control over the sediment removal works and any mitigation.

5.38 We are content that the proposed conditions, with minor additions and amendments, would ensure that effects on ecological interests would be of no more than negligible significance; this is supported by the findings of the ES and the advice from SNH.

5.39 Over and above the requirements of the proposed conditions, European Protected Species, including otters, their holts and resting places, are legally protected from disturbance. It is not disputed that otters are present at the River Nith in the vicinity of the scheme. The surveys undertaken found otter footprints but not any spraints, couches or holts. If pre-construction surveys find otters or other European Protected Species in the vicinity of the scheme and if the surveys indicated that the works to be undertaken would impact upon them then a European Protected Species Licence may be required. The representative from SNH stated that if there had been any serious concerns that a licence was unlikely to be approved, then this would have been stated and in this case it does not have those concerns. It is our view that, whilst the determination of any necessary licence is a separate matter, there is no reason to presume at this point that if such a licence was needed it would not be forthcoming.

5.40 The SNH guidance referred to by Morton Fraser requires planning authorities to consider whether the first two of three licencing tests, that the development is necessary and that there is no satisfactory alternative, would be met in circumstances where protected species are present, negative effects are likely and cannot be prevented by planning conditions. That is not the case here and the references to schemes previously considered and to dredging are in no way comparable to the scheme now proposed.

5.41 Irrespective of the above, we conclude that any requirement for a European Protected Species licence is a separate procedure under different legislation from the consideration of the flood protection scheme under the 2009 Act. In our view there is no reason to believe that the relevant tests cannot be met and the prospect of such a licence being granted is not a matter for any further consideration of the Ministers in relation to the flood protection scheme.

5.42 We note the concerns raised by Save Our Sands regarding bats. The ES states that the tree survey undertaken indicated that there were no field signs within the potential bat roost features, these were blocked with organic material where necessary to prevent any future use by bats. The updated survey found that the features remained un-colonised. We note that SNH has not raised any concerns in this regard. We are therefore content that the blocking of roosts that has taken place has not caused any disturbance to bats. As noted at paragraph 5.22 surveys would be undertaken to address any bat activity that may arise prior to the commencement of works.

5.43 We acknowledge that the implementation of the scheme would result in the felling of a number of trees at Greensands. As we noted in chapter 4, where we considered heritage and visual impacts, the majority of the mature trees would be retained and additional planting is proposed. There would be some ecological impacts as a result of the felling, however the replacement planting would in the longer term offer some mitigation.

5.44 It is our understanding that, in their formal decision the Ministers as decision maker would have to address the matter of Appropriate Assessment under the Habitats Regulations. We recommend that they adopt our findings that the proposed scheme would not have a likely significant effect on the Solway Firth SAC either alone or in combination with other projects.

Overall Conclusions

5.45 Drawing these matters together we find that the scheme could result in disturbance of protected species and that appropriate licences may have to be obtained. We are satisfied that, based on the advice from SNH, it is reasonable to conclude that there would not be a likely significant effect on the qualifying interests of the Solway Firth SAC and therefore no adverse effect on the integrity of the SAC overall. The requirement for preconstruction surveys and with the protection of the relevant legislation the balance of evidence indicates that potential effects on protected species would be negligible and not significant. We note that SNH who administers the licencing system for protected species has not raised any concerns. We therefore consider that the potential presence of protected species and nearby SAC should not preclude Ministers confirming the flood protection scheme.

CHAPTER 6 Impacts on Town Centre, Tourism and Parking

6.1 At the pre inquiry meeting it was agreed that the inquiry sessions would address impacts on the town centre, tourism and parking including economic impact, parking regulations and the prospective trader compensation scheme. We heard evidence on these matters at the inquiry session on this topic from witnesses on behalf of the council and Save Our Sands. We also heard relevant evidence on this topic from Morag McDonald and the Whitesands traders at other sessions. We have included their evidence within this chapter.

6.2 Chapter 7 of the ES deals with impacts on human beings, this includes assessment of impacts on the local economy and chapter 14 deals with transport and access.

Save Our Sands

6.3 The position of Save Our Sands is set out in its initial objection, inquiry statement and closing submission and in the precognition of [John Dowson](#) who participated on behalf of the group. The points raised are summarised in the following paragraphs.

6.4 The disruption caused by the two to three years construction period and lack of access to the riverside during that time would be disastrous for businesses that are nearby and highly detrimental to the wider town centre economy. The fact that there has been no assessment of the impacts on the retail and business sector of the town centre is unacceptable. No scheme should progress until such time as a full business impact study has been undertaken involving representatives from the businesses in that area.

6.5 The proposals would result in the loss of approximately 230 parking spaces to the detriment of the vitality and viability of local businesses. The parking at Whitesands is currently well used and essential in that location to serve businesses on the Whitesands, Bank Street, Friars Vennel, Irish Street, High Street and beyond. That parking is also at a key location in relation to Dumfries Town Centre and its removal would badly affect the Loreburne Shopping Centre end of the High Street. The removal of a large amount of parking at Whitesands would make the town centre less accessible and is contrary to Local Development Plan Policy ED8.

6.6 The alternative parking arrangements would not be fit for purpose, they would not serve the Whitesands and replace the 230 spaces lost. The additional parking proposed at Greensands is not in a convenient location for the town centre and is not likely to be used by shoppers, visitors and tourists. The proposed access and egress to the Greensands car park is inadequate and would cause traffic congestion. Nith Avenue is inadequate for the increased level of use and as a two way route to the proposed parking at Greensands. The increased traffic associated with the use of that parking would conflict with the primary school at this location.

6.7 The council figures relating to parking are inaccurate. The 'D&G Homes' site is presently used as a car park and would not provide additional spaces. The amount of available parking at that site would be reduced in order to accommodate the proposed public toilets and pumping station. The scheme relies on the D&G Homes site but it is not owned by the council, it is proposed for development and may not be made available. The removal of parking restrictions and re-lining throughout the town centre would not create new parking spaces, these spaces are presently used since parking restrictions are not enforced. Overall there would be a deficit of approximately 170 car parking spaces, this

would have a devastating effect on the town centre and is contrary to Town Centre Accessibility Policy ED8. The removal of car parking is an adverse effect of the bund design and the efforts to relocate cars is an expensive and unnecessary mitigation designed to attract government grant.

6.8 The scheme would remove the turning facility for buses, in order to be facing the right way for their journey they would be rerouted around narrow streets that are unsuitable for such movements. The rerouting depends on some parking restrictions being put in place to create adequate space for manoeuvring of vehicles. The council has, however, failed to introduce a policy to decriminalise parking making it impossible to enforce on-street parking regulations. The council has also removed traffic wardens from service. The rerouting of buses would therefore cause traffic congestion in nearby streets. The proposed change to the bus terminus is unnecessary as the current system works well and provides a vital service to shoppers and tourists. Any removal of this facility from the Whitesands should be done as part of an agreed town-wide strategy. The traffic management proposed should not form part of the flood protection scheme and it has not been subject to a full public consultation exercise. The scheme requires greater understanding of and provision for tourist buses to be accommodated in a welcoming manner. The scheme would not provide a welcoming entrance to the town, even if tourist buses can be accommodated, the views of the river would be blocked. If the council wishes to remove the bus terminus from the Whitesands it has a duty to do so as part of an agreed and comprehensive town-wide strategy.

6.9 There is no evidence to support the assertion that there would be increased footfall on the Whitesands and increased investor confidence as a result of the scheme. The assertion that the Whitesands is 'much diminished' is rejected. It is already an extremely busy tourist destination because of the river views and accessible car parking. The existing bus turning and car parking also help create the busy pedestrian activity that currently makes the Whitesands so active.

6.10 The council has abandoned any attempts as part of the Whitesands Masterplan to increase the vitality of the town centre as a whole. The proposals to regenerate the town centre included in the 2014 masterplan were considered by the council to be 'critical' to the delivery of the project but all of these items have been excluded from the 2017 proposals. It is considered that without those proposals the scheme would result in public realm deterioration. There is no evidence that the scheme adheres to Scottish Government policy on place-making. Without the previous public realm improvements, that vision has gone.

6.11 Inadequate information has been made available relating to the proposed compensation scheme, traders have not been properly informed about the relevant arrangements and procedures. It is essential that a properly designed scheme is agreed with the traders before any work begins. The council has not budgeted for the payments. The Minister should make a clear statement about compensation schemes and who would be eligible. Small businesses are likely to be put out of business due to the retrospective nature of compensation payments and as applications would have to be made with the aid of expensive consultants and accountants.

6.12 There is no need to relocate the public toilets and no design is included for this facility. There is no confidence in the council to provide a facility to the same standard as currently exists.

6.13 The scheme would raise issues of health and safety for persons using the area. The design of the scheme would result in spaces where people would feel vulnerable. The proposed barrier would mask the river from view, would create a potentially dangerous area for pedestrians and create a problem for emergency vehicle access to the river from the Whitesands. It seems there has been little consultation with police, fire, ambulance, Nith Inshore rescue, etc. CCTV is currently available on the Whitesands but that alone has not been able to prevent tragedy. The design makes the potential danger worse.

Conclusions

6.14 All of the changes to parking, the public roads and bus stops would lead to congestion and safety issues and would adversely affect businesses at the Whitesands and the town centre. The river views and car parking should remain relatively unchanged. With other design options there would be no need to lose so much car parking spaces from the Whitesands. A non-bund solution to flooding would avoid the impacts on the town centre, tourism and parking.

Whitesands Traders

6.15 During the background inquiry sessions we heard from individual proprietors of established businesses at Whitesands including [Brian Sherman](#), [John Greenwood](#), [William Potts](#) and [Peter Bacci](#), all of whom raised issues relevant to the town centre and parking impacts. The comments of these parties is summarised in the following paragraphs.

6.16 The insensitive design of the scheme, including the bund and relocation of car parking would have a seriously detrimental impact on and may be fatal to the businesses at Whitesands. It would block views of the river and Devorgilla Bridge which are important assets to the businesses at this location. The role of the views to those businesses should not have been so readily dismissed. The removal of the bus turning facility would mean that Whitesands would no longer be used as a bus station and people would spend less time there. The scheme would reduce footfall at Whitesands and the amount of visitors to local businesses would be reduced. The businesses at Whitesands, including cafes and newsagents, are heavily reliant on the passing trade that the bus stance and car parking brings. The council has no proof that the scheme would increase footfall at Whitesands.

6.17 The proposed parking at Greensands is not a suitable replacement, it is out of the way and people would be reluctant to park there, especially when dark. People parking there are unlikely to use Whitesands as a route to the town centre.

6.18 The construction works would cause traffic congestion, delays and disruption to local businesses and loss of trade. Such impacts and serious loss of trade have been experienced previously with much lesser projects. Negative effects can even be felt during shorter interruptions due to events like the Rood Fair and the Big Burns Supper. Once customers are lost to elsewhere it is difficult to get them back. Retrospective compensation would not help to save the businesses.

Oliver Mundell MSP

6.19 Details are provided in the inquiry statement and original letter of objection. Whitesands is not an underused part of the town, it has higher occupancy rates and footfall than other areas. Inadequate information is available to assess impacts on local

businesses, the town centre and tourism. Any reduction or changes to parking could drive businesses out of the already struggling town centre. The alternative parking would not address the concerns that have been raised, Greensands is too far away from the town centre. Relocation of the bus stops may discourage people from heading to the top end of the Whitesands and harm local businesses. Regeneration of the town can only be achieved in collaboration with local residents and traders.

Morag MacDonald

6.20 In addition to the verbal evidence given at the inquiry session on community engagement details are included in the original objection and the closing submission. There are several pedestrian access points to Greensands car park, including a bridge, narrow roads, lanes, footpaths and high walls that reduce visibility. These are compounded by poor lighting. The safety and security of this car park is a major concern particularly for women and workers who may use it later in the evening.

Written Submissions from Objectors

6.21 Many of those who submitted objections to the scheme, those who made further written representations and individuals who participated directly in the inquiry process made comments relating to the topics under consideration in this chapter. These are not listed individually but may be summarised as set out below.

- The loss of car parking would have an adverse impact on the mainly independent retailers at Whitesands, the struggling and fragile town centre and the wider Dumfries economy. The Whitesands is thriving, it has fewer empty businesses than the town centre because of the available parking at that location. The parking at Whitesands is the most popular in the town, it is easy to find, centrally located and convenient. The scheme would remove parking that is suitably located for the elderly and the disabled. Inadequate parking would remain to serve the post office at Whitesands.
- Whitesands is presently a tourist attraction and a favourite stop for tourist buses. Loss of parking and the bus waiting area would cause it to become a through route rather than a destination. Views of the river and Devorgilla Bridge presently attract tourists to stop at Whitesands. Loss of the views would have an adverse impact on tourism which the town centre economy is highly dependent on.
- Greensands is not a safe or convenient location for replacement parking for those shopping or working in the town centre, particularly for those who are less fit or who have limited mobility, particularly the elderly. People parking there are less likely to visit the Whitesands. Greensands is in a less obvious location for visitors to find and would not accommodate large vehicles such as motorhomes that are able to park at Whitesands. This car park also floods. The access to and from Greensands car park is already difficult and increased parking here would worsen congestion in surrounding streets and at busy junctions, especially the Castle Street/Buccleuch Street junction.
- The figures for the replacement parking are incorrect, the council has manipulated the figures. The parking at the D&G Homes site already exists and is very well used. The removal of parking restrictions would not create additional spaces as those

spaces are also already used. The proposed provision would therefore be inadequate.

- The lengthy construction period would cause disruption to the flow of traffic and add to the congestion in and around the town. Whitesands is a main cross town route, additional congestion here would cause major inconvenience and impede access by emergency vehicles. Town centre residents would face a long period of disruption.
- The disruption caused by the construction works would deter customers and tourists from visiting the town centre displacing them to retail parks and other towns. It is likely to adversely affect trade and cause businesses to close. There is evidence of the adverse effects of previous disruption, including works to the Burns Statue, which badly affected businesses in the vicinity.
- The adverse effects of the scheme on local businesses would be worse than the effects of flooding. The cost to businesses would exceed the benefits of the scheme in terms of flood prevention or environmental improvements.
- There is no guarantee that the townscape improvements and regeneration proposed in the Whitesands Masterplan would be delivered, these were previously offered as part of a comprehensive scheme for the area along with the flood protection scheme.
- Inadequate information has been made available and no firm commitment has been given in relation to the compensation scheme.
- The relocation of the Rood Fair and removal of the existing toilets are opposed.
- Alternative options are available that would avoid the significant loss of parking and disruption and would avoid the need to relocate the fair.

6.22 The following individuals raised additional detailed points:

G. Blackadder (Objector No 189) (Local business owner). Every time the fair is in town turnover drops by about 20%. Businesses would be unlikely to survive a 2 to 3 years construction period and would not grow during that period.

P. Coles (No 151) Dumfries is a market town and many shoppers and visitors arrive by car, the town centre is reliant on easy access and convenient parking. The proposed bus route via Bank Street and Irish Street would cause congestion on this narrow route and would affect the Loreburne Centre Car Park and the pick-up point for Marks and Spencer.

N. Cowan (No 22) (Local business owner). Relocated parking would lead to loss of footfall to businesses at Whitesands. The council has failed to substantiate its claims that footfall would increase.

D. Dalzell (No 306) Directing buses via Bank Street would add traffic to an already congested junction.

G Little (No 35) (Local business owner). The period of the Rood Fair is the quietest for business. If the fair is allowed to relocate to the remaining parking at Whitesands and land at the D&G Homes then the lack of remaining parking would have a bad effect on business.

L. Milligan (No 164) (Local business owner). The council has failed to fully assess the impact of the scheme or the associated construction period on businesses and has not undertaken contingency planning with businesses to prepare for the impacts. There is no evidence to support the conclusions in the ES that the effects of construction on businesses would be 'temporary impacts of minor significance'.

G. Parry (No 167) (Local business owner). The demonstrated adverse impact of the Rood Fair on trade is accepted as it is temporary. Effects of a longer period of disruption and due to relocation of parking would be catastrophic.

Council

6.23 The council's position is set out in its [inquiry statement on impacts on the town centre tourism and parking](#), its closing submission and in the precognitions of [Danny McCluskey](#), [Jason Syers](#) and [Tony Topping](#).

6.24 The effects of the scheme on local businesses has been assessed as part of the ES. It states that the number of people who would gain employment through the scheme would be very small in comparison with the population of the town as a whole. The impact of the scheme in income and employment terms is therefore considered to be of very small scale and of minor positive significance. Although some mitigation might be possible through encouragement to source local labour and materials this is unlikely to enhance the significance of this impact.

6.25 The ES indicates that the scheme could have effects of minor adverse significance during construction as a result of disruption to tourism, traffic and access to facilities, shops and homes. It notes that such adverse economic impacts are difficult to quantify and it is not possible to estimate the potential loss of profit to local businesses during that period. It is however estimated that any potential loss in profit against the previous year's average would be less than £1.75 million. It is concluded that this would be a temporary effect which is considered to be of minor adverse significance. Mitigation to minimise impacts would include liaison with local businesses to understand their needs, the implementation of a traffic management plan, signposting of diversions and provision of clear and accessible public information. Construction works would be phased and managed to maintain access to business premises and to minimise disruption on the road network and take account of important events or busy shopping periods. With mitigation it is concluded that the resultant residual effect would be of minor positive significance.

6.26 It is considered that impacts on retailing associated with the scheme would be indirect and linked with human attitudes to disturbance and convenience and how such might affect their shopping decisions. It is therefore considered very unlikely that any assessment of the temporary or long-term impacts that the scheme may have on the retail sector of Dumfries would yield data of statistical significance that could then be used to infer impact magnitude. Consultation undertaken included the business community. Neither the Town Centre Forum nor any other trade organisation objected to the scheme.

6.27 Upon completion the scheme would have a positive effect on investor confidence due to the reduction in damages to property and benefits from halting further degradation to housing as a result of flooding. The whole town would benefit from removal of the threat of flooding and its blighting effect.

6.28 The 2009 Act provides that compensation is payable to those who sustain damage or depreciation as a result of the construction and maintenance of the scheme. It is proposed that a scheme of advance payments would be set up so that no business is unduly affected. Nevertheless the application of those provisions is not a matter for the inquiry nor is it for the Ministers to alter those provisions.

6.29 It is recognised that the Whitesands area and the river contribute considerably to the Town's overall appeal to the visitor. Increased flooding in recent years has impacted negatively on this area and the town centre and is a barrier to inward investment. The dominance of the area by car parking and the busy road result in a first impression of this area that is currently mediocre. The scheme aims to improve the quality of Whitesands as a public space. Improvements to the riverside area and enhancements in townscape would encourage tourists to the area. Improved access to Devorgilla Bridge would make it accessible to tourists who could not previously enjoy the views from the bridge. The increased footfall would create business opportunities which would regenerate the area. The design of the scheme and the predicted regeneration of the Whitesands are consistent with government policy on place-making and 'Town Centre First' principles. The scheme is also designed to improve areas of current anti-social behaviour. The existing public toilets would be relocated, most likely at the entrance to the D&G Homes car park which would be acquired as part of the scheme. Evidence from other public realm schemes is that better quality places can improve the local economy.

6.30 Transport and connectivity have been identified as having significant roles in the success of the scheme and the regeneration of Dumfries Town Centre. The scheme aligns with national, regional and local policies, particularly with regard to flood risk reduction and transport network reliability. The community concerns relating to parking expressed during the extensive consultation process have been taken into account in the scheme.

6.31 The development of the scheme has included parking surveys, assessments and detailed analysis. [The Dumfries Town Centre Parking Study Report](#) (JMP 2013) found that whilst there are localised car parking pressures, overall there is spare on and off-street parking capacity in Dumfries. The 146 parking spaces displaced from the riverside area of Whitesands could be accommodated elsewhere within the town centre. The public engagement exercise in 2015 showed that 60% of those responding to the questionnaire would be prepared to accept some changes to car parking provided that replacement spaces would be provided at Whitesands or nearby. It also showed that 82% considered that changes to existing parking arrangements were insufficient reason not to build a flood defence scheme.

6.32 The existing shop-side parking at Whitesands would be retained and would comprise short stay, disabled and bicycle parking. It is intended that the disabled spaces that would be lost from the riverside car park at Whitesands would be replaced at the shop-side parking area. A review of the disabled parking bay provision would be undertaken during the detailed design stage of the project.

6.33 Additional parking to replace that lost from Whitesands would be achieved through a combination of alternative and reallocated on and off-street parking within a 10 minute walk from Whitesands and the High Street. This would include the acquisition by the council of the D&G Homes pay and display car park and it being made available for free parking, additional parking at Greensands and the removal of existing parking restrictions. The

amount of parking spaces within easy walking distance of the town centre would be increased with a net overall gain of 50 spaces. Full details of available spaces are contained within the [committee report of 19 December 2016](#).

6.34 The parking proposed at Greensands would provide an attractive and accessible parking facility. No negative feedback was received during the 2013 public engagement exercise to additional parking at that location. The scheme proposes an attractive, safe, accessible and low impact solution for vehicular access and egress to that car park. The net gain of 64 long stay spaces at that location would be within 85 metres of Whitesands (a less than 2 minute walk) and 385 metres (a less than a 5 minute walk) to the High Street. Visitors and customers to the Whitesands would still be able to park within a 10 minute walking distance of the Whitesands and High Street. A walking time of 20 minutes (1.6 kilometres) is specified within the Scottish Government's ["Transport Assessment and Implementation: A Guide"](#) as a reasonable journey time for pedestrians; the relocated parking is well within this standard.

6.35 A minimum of 80 new, free and readily available short term spaces would be created by reviewing existing waiting restrictions, carriageway widening and by making the best use of available space. Details are provided within the [committee report of November 2014](#). Current unauthorised on-street parking in the town centre is usually opportunistic in nature and is generally short stay only.

6.36 The majority of replacement parking would be provided before the parking at the riverside frontage of Whitesands is removed. A town centre signing strategy would be developed at the detailed design stage to address both the construction period and the final permanent scheme. Alternative parking would be publicised and new signage would be installed at strategic locations.

6.37 Although the location of parking might be more important to some people it is considered that the combination of alternative and reallocated parking and a signing strategy would adequately mitigate the reduction in parking at Whitesands. There would be extensive free parking available which visitors would be unlikely to experience in most other areas. The scheme would therefore be unlikely to displace visitors to other locations in Dumfries or to other towns and cities.

6.38 The current off-street bus terminus would be removed and replaced by new on-street stands and four bus shelters approximately 40 to 80 metres southwards on the northbound carriageway and the existing southbound setting down point would be retained. Buses that currently use the terminus to turn would use a route along Bank Street, Irish Street and Nith Street instead. The design team has considered the proposed route via Bank Street and is satisfied that with some modifications it would accommodate buses. Tourist buses would still be able to stop at the Whitesands. The scheme has been developed in consultation with bus operators.

6.39 The ES predicts that impacts on the local and regional transport network would be of moderate positive significance due as a result of the reduced disruption to the transport network associated with flooding. The assessment considers impacts at a number of locations. Although the scheme would relocate the bus stances it is considered that it would improve general access to those services and reduce the distance and gradient for walking to the town centre. The scheme would also improve linkages to active travel choices with provision for walking and cycling for recreation, commuting or to access the

town centre. Combined with reduced disruption from flooding the scheme would have a positive and major benefit to public transport users at Whitesands. There would be no net reduction in car parking and replacement parking would be within a 10 minute walk of Whitesands and the High Street. The parking and loading bays adjacent to the businesses at the north end of Whitesands would be retained. The short term impacts during construction would be mitigated by minimising disruption to and the timing of works. Overall it was concluded that the residual impact of the scheme would be of minor magnitude and negligible adverse significance.

6.40 When parking is lost at Whitesands due to flooding or when the fair is in town, Dumfries does not come to a stand-still, people continue to use the local roads and car parks and are able to shop and access the town centre. Parking is absorbed into the local network of on and off-street parking facilities or people choose to travel by different means. The surveys undertaken indicated that the use of the Whitesands parking is close to capacity at present. However, it has been clearly demonstrated how the parking aims and objectives can be met resulting in no overall reduction of parking for the town.

6.41 There is no evidence of a legal charter or requirement that obligates the council to make provision for the Rood Fair on or at the Whitesands or any other part of the town centre. Nevertheless the council is committed to accommodating the fair and discussions are ongoing regarding its continuation at Whitesands once the scheme is complete, albeit possibly on a reduced scale or including other land.

Council's Conclusions

6.42 It is considered that there is evidence that regular flooding can have a long term detrimental effect on property and discourage investor confidence in affected areas which can lead to gradual economic decline. The scheme would give rise to positive effects on local businesses due to reduced direct and indirect flood related damage and expense and disruption to access and services. It would bring positive effects to the town centre including increased employment opportunities during construction and potential improvements to housing where flood risk is reduced. Any potential adverse impact on businesses would be off-set in the longer term by the reduction in the impact of flood events and the improved public realm which would enhance the tourist experience, increase footfall, improve investor confidence, economic activity and employment and promote the regeneration of Whitesands. The scheme does not preclude the regeneration proposals included in the Whitesands Masterplan.

6.43 There would be no net loss of parking as a result of the scheme. Reduction in parking at a particular location is not a good basis for rejecting a scheme to reduce flood risk.

Reporters' Conclusions

6.44 We have considered all of the objections received in relation to town centre, tourism and parking matters, most fall within the following headings with the exception of some points which are addressed under other matters.

6.45 The council contends that overall the scheme would have positive effects on the town centre. Adverse effects would be temporary, would be off-set by mitigation and in the longer term would be outweighed by the benefits of the scheme.

6.46 The loss of car parking, the disruption from construction and the effects of both on shops, businesses and tourism are among the most frequently stated reasons given by objectors for opposing to the scheme. Save Our Sands and local traders have expressed concern that the changes to the bus stops would have an adverse impact on trade. We acknowledge the strength of feeling expressed in relation to those matters by the objectors who live and work in the area. They draw on direct experience of the area and their opinions should be given some weight. The feedback provided from the council's community engagement exercises indicates that some parties support the removal of parking at Whitesands for aesthetic reasons. However this was not evident in the objections received in response to the scheme.

6.47 We recognise that Whitesands is a busy part of the town centre, a location for pubs and shops and a destination for both locals and visitors. As confirmed by the parking and transport surveys by JMP and [Systra](#) and our observations on site the existing car parking is well used and is clearly an activity generator. We agree that the parking is convenient for the businesses at this location and for those on High Street and in the town centre.

Impacts on Businesses, the Town Centre and Tourism

6.48 We are aware that National Planning Framework 3 is supportive of town centres and their role in meeting the needs of residents, businesses and visitors. SPP promotes the health, vibrancy, vitality and viability of town centres. This is also reflected in the Local Development Plan which seeks to strengthen the role of and improve the vibrancy and viability of Dumfries town centre.

6.49 It was estimated in the ES that the potential loss of profit to local businesses during the construction period would be £1.75 Million which would be a temporary effect of minor adverse significance. The level of significance is based on SEPA's guidance on trader compensation as detailed in table A7.3 in Appendix A of the ES. However the council's witness Mr McCluskey conceded that the figure of £1.75 million was a broad estimate. Neither the ES nor the evidence from Mr McCluskey provide a detailed breakdown of how this figure was reached. Although some businesses are likely to see a reduction in trade we recognise that others may benefit from the spin off effects and displaced trade during the construction period.

6.50 The ES predicts that the effects of the construction phase would have an adverse impact on all modes of transport but that forward planning would minimise any of the negative effects. Given the length of the construction period compared to the life of the project it is concluded that the impacts would be minor adverse.

6.51 The ES notes that the construction period would render large sections of the riverside area inaccessible and would impact on activities such as cycling and running. However the impact was considered to be moderate to minor adverse on the basis that there are alternative locations for such activities. This recognises that use of the area would be displaced during the construction period. We therefore consider that the significant disruption to the use of the riverside walkways would impact on footfall in this area and consequently have an impact upon Whitesands and the town centre.

6.52 The scheme would affect one of the busiest locations in Dumfries at a main route into and through the town centre. The site of the scheme is close to many shops and

businesses, a number of whom rely on this area for access and parking for servicing and customers. It is clear to us that restrictions upon access and parking and consequent disruption to businesses, residents and visitors and are inevitable. If access to the town centre is difficult then we are aware that there are retail parks within easy reach as an alternative retail destination. A detailed construction programme has not yet been developed and although the construction period is anticipated to be two to three years we recognise that the council intends to phase the works and take steps to minimise impacts on local businesses. However, we consider that some disruption would be unavoidable.

6.53 Taking the aforementioned matters into account we consider that it is reasonable to conclude that the restrictions on access to the riverside and the large Whitesands car park during this time would be likely to affect the number of people using that part of the town.

6.54 In the longer term we agree that the scheme would bring economic benefits to businesses and other property owners through direct flood damages avoided. As set out in the revised version of table 4.2 of the Economic Appraisal this would be significant over the lifetime of the scheme particularly taking into account the damage caused by a large flood event. The council believes that in the longer term the reduction in flooding and public realm improvements would result in increased footfall and economic activity and improve investor confidence. This would accord with Scottish Government and Local Development Plan policies that seek to improve the vitality of town centres. Although the ES predicts that effects on investor confidence may potentially be of minor-moderate positive significance there has not been any detailed economic analysis which supports that conclusion. Although there is no detailed evidence to quantify the economic benefits of the public realm improvements we consider that it would be reasonable to conclude that there would be some positive effects.

6.55 A number of objectors, in particular the local traders, raise concerns at the effects on business of the relocation of the bus turning area. Although tourist buses would still be able to drop off in the vicinity of the Whitesands it is not clear whether the revised arrangements would allow buses to wait for tourists to assemble and be picked up. Should there be limits on waiting then this may have some influence on footfall but there is no reason to conclude that this would be entirely negative for local businesses. The relocation of the northern bus stances would be further from some businesses, including those operated by persons who gave evidence, but they would be closer to other similar businesses. While in the longer term some businesses may experience negative effects, others may gain. Trade may therefore be displaced rather than lost as a result of those changes.

6.56 We accept that it is difficult to predict impacts on business and the town centre. The ES does not include any detailed economic assessment of the potential temporary and longer terms effects on the vitality and viability of the businesses or the town centre. The ES also indicates that there is some uncertainty in relation to the magnitude of the effects identified. This is not entirely unexpected given the difficulties inherent in economic forecasting. Preventing major damage from large scale flooding events would have significant benefits. The further evidence submitted by the council as part of the inquiry did not include a retail or business impact assessment and none of the local business proprietors submitted any financial evidence to support their views. The evidence therefore does not allow us to determine with any certainty what the scale and significance of any potential negative or beneficial effects might be. We are therefore not able to draw any firm conclusions on the effects of the scheme in relation to effects on businesses and the town centre. We balance the overall advantages and disadvantages in chapter 9. In carrying out

the balancing exercise it would be prudent not to be overly optimistic regarding the benefits of the scheme.

Car Parking

6.57 The council's figures and assertion that there would be no net loss of car parking have been disputed by a number of parties. It is not disputed that 146 spaces would be lost from the riverside car parks at Whitesands in order to accommodate the scheme. Table 1 of the council's Committee Report of 19 December 2016 notes that a total of 65 spaces are proposed at the D&G Homes site, an additional 64 spaces would be provided at Greensands car park and a total of 80 spaces are proposed through the review of on-street waiting restrictions.

6.58 It is clear that the parking to be made available for free at the D&G Homes site are not additional spaces as this is an existing car park. Furthermore the number of spaces at this car park would be reduced to accommodate the proposed toilets and pumping station. The parking surveys and our observations over a number of visits indicate that there appears to be spare capacity at that location, although we accept that it is well used and that the level of usage varies significantly depending on the time of day and the day and week. We observed that it was considerably busier at some times than others. This car park is relatively enclosed and does not benefit from good levels of passive surveillance, we noted that it is not well used after dark. Although Save Our Sands raised concerns that the D&G Homes site may not be available the council stated that negotiations have taken place to acquire the site. Even if those negotiations do not prove successful we are aware that it has powers to compulsorily acquire this site should that be required.

6.59 During our site inspections we observed that unauthorised parking takes place in a number of locations where parking restrictions are presently in place. This is supported by the evidence given by the council. In the precognition of Tony Topping (para 4.15) it is noted that the Dumfries Town Centre Parking Study states that there is a high level of non-compliance with the on-street parking regulations and maximum stay durations. He notes that this is due to a combination of perceived limited on-street parking, inconsiderate driver behaviour and lack of enforcement.

6.60 From the figures provided by the council in the committee report of December 2016 a total of 176 spaces would be removed at Whitesands, Dockhead and from on street amendments as a result of the scheme. Of the 222 replacement spaces proposed 77 are new spaces to be formed at Greensands and other council off street owned car parks. However 65 are within the existing D&G Homes car park and 80 are proposed from changes to waiting restrictions. The council has treated these as net gains, whereas many objectors argue they are already in use, albeit currently as paid or unauthorised spaces.

6.61 The ES considers the impacts of the scheme on transport, access and parking. In terms of the riverside area of Whitesands the assessment concludes that the effects on car parking at this location would overall be positive but minor on the basis that replacement parking would be provided within at least a 10 minute walking distance.

6.62 We agree that the implications for footfall due to the parking changes are difficult to accurately predict. However we consider that the evidence suggests that the riverside parking at Whitesands is well used and conveniently located to serve the businesses at that location, High Street and the town centre. Following our site inspections we agree that the

proposed replacement parking at Greensands is less conveniently located to serve those areas. That car park is peripherally located in relation to the town centre and the pedestrian routes are not level. We also share the concerns raised regarding the accessibility and safety of that parking. That location and the pedestrian routes to and from it do not benefit from good levels of passive surveillance. In addition the vehicles and any anti-social behaviour would be screened to some extent by existing and proposed vegetation. The use of CCTV may be of some assistance but it would not entirely remove the disincentives to park at this location. It would in our opinion be less attractive than the existing Whitesands car parking.

6.63 Save Our Sands disputed the council's interpretation of the responses to the community engagement exercise in relation to the public comments on parking. In particular it challenged the council's position in relation to the acceptability of the changes to parking and whether preservation of parking should prevent the implementation of a flood defence scheme. We agree that it is not clear from the exercise what extent of parking changes the respondents to that exercise may have considered acceptable. We also agree that although a high percentage of respondents indicated that changes to existing parking arrangements were insufficient reason not to build a flood defence scheme, this does not provide clear evidence of support for the current scheme. In terms of our consideration of the objections to the scheme it is clear to us that the majority of those opposed to the scheme find the changes to the parking unacceptable.

6.64 We acknowledge that JMP's parking study identified a downwards trend in the demand for town centre car parking. It found that there are fluctuations in the occupancy of off street car parks and that there are localised car parking pressures but concluded that overall, there is spare capacity at some town centre car parks. However the report dates from 2013 and it recognised that further surveys would be required to confirm if the downward trend in demand would be continuous. We recognise that this is not a static position and that patterns in retailing are subject to change.

6.65 We find that overall there would be a net loss in the quality of parking as a result of the scheme. Although the council proposes replacement parking within recognised walking distances and associated directional signage, the replacement parking would be less conveniently located and it would not be as appealing to all sectors of the population as the existing parking.

Other Matters

6.66 The council has been criticised by some parties for including public realm improvements in the flood protection scheme in attempt to gain funding for those works. There have also been objections that the council has not including things that were proposed as part of the Whitesands Masterplan. There is nothing in the 2009 Act limiting what may be included in a flood protection scheme. We are required to consider the scheme as proposed and the environmental improvements that have been included are an intrinsic part of it. The funding of the scheme or any particular aspects of it are not matters that we may give consideration to. Even though the scheme does not include proposals that are part of the Whitesands Masterplan the council may choose to pursue some or all of those other proposals separately, the scheme does not preclude that.

6.67 The submissions from Save Our Sands included an extract from a document believed to be a medieval royal [charter](#) for a market and fair ([SOS 024](#)) relating to the burgh

of Dumfries. However that document does not specifically mention Whitesands or a specific site. We have not been presented with any evidence that there is any continuing obligation in relation to the fair that would prevent the scheme from going ahead. We note that the council has indicated that it is in discussions with the operators of the fair. We believe that there is no reason to assume that the fair could not continue in the vicinity of Whitesands, albeit on a smaller site, or that an alternative site could not be found. The potential relocation of the fair and the appropriateness or acceptability of the alternative site is a separate matter and is not material to the consideration of the scheme.

6.68 Although objections have been raised in relation to the relocation of the public toilets we note that they would still be located within the Whitesands area only a short distance from where they are presently located. Irrespective of that their relocation is not part of the formal flood protection scheme.

6.69 We recognise that traffic management orders would be required for the revisions to on-street waiting restrictions. As we heard from the council's witness Mr Topping, this is a separate process from the Flood Protection Order and the council would be required to pursue this and undertake any required advertisement under the appropriate legislation. That process would facilitate the detailed consideration of the impacts of the traffic management proposals.

6.70 In terms of the safety issues raised we accept that there would be reduced visibility of the river and the riverside walkway. As we concluded in chapter 3 these issues could be addressed in the detailed design of the scheme through the incorporation of appropriate lighting and CCTV and the design and specification of the landscaping works.

Overall Conclusions

6.71 We recognise that the short term impacts of the construction works and longer term impacts of the scheme would have both positive and negative effects. We can understand the concerns of the Whitesands retailers. Currently they have known regular flooding of a scale which they feel they can deal with acceptably. Witnesses have told us that in their experience in an average year there are very few days when trading is lost or seriously disrupted by flooding. By comparison the loss of parking and disruption are matters that have unknown consequences which would be out with their control.

6.72 The fears that the scheme would kill the town centre or lead to significant numbers of people not using Dumfries may have been over stated but we can understand that even short term adverse impacts could be fatal to some businesses. Over the long term lifetime of the flood defences it is inevitable that there will be changes to shopping patterns, footfall and land uses. It is likely that such impacts would vary spatially and at different times, with or without the proposed scheme. It is not possible to be certain regarding the potential short or long term economic impacts of the scheme upon any individual business. It is also impossible to predict the wider economic benefits of the scheme with any certainty. A major flood event may never happen within the lifetime of the scheme. On the other hand, the council may be correct and the raised walkway could increase the number of visitors. It would therefore be prudent to adopt a conservative approach in expressing any longer term economic benefits to businesses and the town centre.

6.73 There may be both long and short term impacts not just to Whitesands but also the wider town centre from disruption and removal of parking from this location. The potential

economic impacts of the changes to parking is not clear, however it is our view that the effects would, at least in the short term, not be as positive as the council has predicted. We acknowledge that alternative schemes would avoid the significant loss of parking, however as explained in chapter 3 there are also legitimate concerns at the effectiveness of alternative schemes in a major flooding event. In any case, we are required to consider the scheme currently before us. We believe that on their own the changes to existing parking arrangements would be insufficient reason not to build a flood defence scheme.

6.74 The council recognises that the Whitesands area and the river contribute considerably to the town's overall appeal to the visitor. As it is not possible accurately predict the impacts of the economic effects of the scheme and the changes to parking the effects on tourism cannot be quantified. We consider that at least in the short term, when access to the riverside is curtailed and there is disruption from construction works, the impacts are likely to be negative. In the longer term we recognise that the scheme would retain some riverside parking and could still constitute an attraction to tourists and other visitors. We have considered visual impacts in chapter 4.

6.75 Although the compensation scheme would provide some chance of financial mitigation it is not ideal for any business to be dependent on such payments for any significant length of time. We are aware that cash flow is crucial to businesses and that any delays in obtaining compensation payments could have serious consequences. We are also aware that uncertainty may adversely affect businesses and hinder investment. Nevertheless the 2009 Act makes provisions for compensation payments and the council has stated its commitment to work with the local businesses and to establish a scheme to allow for advance payments.

6.76 We recognise that the council has had to reach a view taking account of the long term protection offered by the scheme. The benefits of the scheme in terms of flood protection would be wider than just the Whitesands retailers. Although economic impacts are uncertain these have to be balanced against the likelihood that flooding will increase in frequency and severity. However we consider that the effects on the businesses, the town centre, tourism and parking should be weighed in the final balance.

CHAPTER 7 Community Engagement

7.1 At the pre inquiry meeting it was agreed that the topic of community engagement would be addressed at the inquiry. Chapter 16 of the ES deals with public engagement and is supplemented by [Annex D 'Community Consultation Report'](#), these provide details of the consultation events that were undertaken. The Community Consultation Report also documents the feed-back from those events. In addition to Save Our Sands and the council we heard evidence on this topic from Ms Morag MacDonald, an individual objector.

Case for Save Our Sands

7.2 The position is set out in the original objections from the group and John Dowson, the Save Our Sands inquiry statement and closing submission and also in the precognitions of [Mr John Dowson](#) and [David Coulter](#) who participated on behalf of the group.

John Dowson

7.3 The engagement undertaken has not been adequate, effective, robust or fair. The engagement did not comply with best practice guidelines including the council's own policy of adopting the [National Standards of Community Engagement](#). It did not meet the criteria described in [Arnstein's Ladder of Citizen Participation](#). Consultation also failed to comply with Section 6 of the Flood Risk Management (Scotland) Act 2009. The consultation has not been as extensive as suggested, many of the events listed by the council were committee meetings in which the public were not able to participate. There has been inadequate consultation on certain aspects of the scheme such as the drainage impact assessment, public realm works, and traffic management, including changes to the bus routes. We addressed alterations to bus routes in chapter 6.

7.4 Public consultation does not equate to true community engagement. The community consultation should have focused on those most affected by the scheme. It is unacceptable that there has been no formal notification of town centre businesses who would be detrimentally affected by the car parking proposals. There has been no attempt to engage with the town centre business community or the town centre manager. There has been no consultation with communities that are likely to be affected by the relocation of the Rood Fair. Those who would be affected should have had the right to be involved in the decision making process. Requests for the community to work in partnership with the council were denied. Complaints raised during the design process were not dealt with in a fair, open and independent basis.

7.5 The public consultation events were informative not consultative. The visualisations used and the presentations given to the public and councillors were misleading, biased and have been designed to gain support for one option. Other options were not considered in a meaningful and positive way. The presentation of the self-rising barrier option was put together in haste, without proper consideration and in a negative manner. The design team had too much control in the decision making process.

7.6 The feed-back from the charrette was mixed and was selectively analysed by the council to imply support for the removal of cars from Whitesands. Analysis of the written responses to the public consultation actually shows that opinion on the designs is predominantly negative. Inappropriate weight has been given to the outcome of the community engagement process. It is not accurate to say that the proposals were well

received, considerable disquiet has been expressed from an early stage. The petition of approximately 6,000 signatures and social media support of over 2,500 persons for Save Our Sands are evidence of public opinion.

7.7 The consultation process has resulted in an inadequate scheme being proposed. The proposal, with a life span of 100 years, is a town changing scheme; it should not be imposed upon the community against its will. The scheme should not proceed until meaningful community engagement has been undertaken to examine all options and a consensus has been reached with the public. Notwithstanding the independence and impartiality of an inquiry, it is not a substitute for effective and meaningful engagement at earlier stages in the process, particularly due to the inequality of arms between the council and those opposed to the scheme. It is requested that any design solution is not recommended to Ministers until consensus can be achieved.

David Coulter

7.8 The Local Government (Scotland) Act 2003 places a duty on community planning partners to “consult and co-operate” with community bodies in the design and delivery of services. This principle can and should be applied to the development of a Flood Protection Scheme.

7.9 Public consultation and public participation are not the same thing. Participation allows citizens to influence decision making. The council has undertaken what can be described as public consultation not community engagement.

7.10 The council claims that it has provided many opportunities for public participation and consultation and that this constitutes effective and meaningful community engagement. The process of community engagement has failed in respect of the matters before the inquiry. The council has failed to engage effectively and meaningfully with the communities most affected by the scheme. Effective engagement should have focused on the community most affected, in this case the people, businesses and places most affected by flooding, such as the residents at Nunholm.

7.11 The charrette was carried out on the basis that a bund would be needed to protect Whitesands from flooding and that a design solution was required as mitigation to address adverse effects of the bund. As a result other options do not appear to have been considered, there is no evidence of an options appraisal. The presentation of the material in the engagement process, including the use of red crosses against other options on graphics, was biased.

7.12 The scheme itself is largely one of landscaping “improvements” to the public domain. Inappropriate weight has been applied by the council to the outcome of the consultation and to views of individuals upon whom flooding has limited impact and who may have responded positively to a scheme that is more about public realm improvements than flood protection.

7.13 There is no evidence that the council has assessed the impact of the processes of consultation, participation and engagement that it used and what lessons it has learned that would help it improve future community engagement.

7.14 The public inquiry system does not provide a substitute for effective and meaningful public engagement. If the scheme is given approval a perception will persist within the communities affected that they have not been listened to and that the scheme is being imposed against their will.

Others

Morag MacDonald

7.15 Details are provided in the [inquiry statement](#), [precognition](#) and the closing submission.

7.16 The council's public engagement and consultation process fails to meet the National Standards for Community Engagement or legal principles established in Common Law. It is so flawed that it cannot be relied on as a legally sound basis for taking the project forward. It has failed to identify and properly consult all those affected and ensure that they are engaged and involved. Specifically the residents at Nunholm and Kingholm Quay have not been properly engaged.

7.17 The product of consultation must be conscientiously taken into account, making reference to [Regina V Brent London Borough Council, ex parte gunning](#) (1985). However the council has dismissed the opinion of the thousands of people who signed the petition against the proposal. That petition was the product of the consultation process and it should have been taken into account. Irrespective of the quantity of objections from the businesses at Whitesands, those objections are valid. By not acknowledging the petition and the public concerns the perception will persist that the scheme is being imposed against the will of the people.

7.18 Not everyone was able to attend the formal community engagement events. The charrette offered only a very limited window to participate as it only lasted for one week. It was also not just focused on flood protection but also the regeneration of Whitesands including the redevelopment that has since taken place at Dock Park, that influenced the views expressed.

7.19 The consultation that has taken place has pursued and promoted one option, the earthen bund, and failed to meaningfully and fairly consider alternatives, particularly the self-rising barrier. The consultation was presented in a biased format and prevented the public from being able to properly and fairly consider and comment on alternatives. The self-raising barrier option was not taken to the charrette for consideration. It was not true community engagement involving respectful dialogue, allowing people to reach their own conclusions and shape the decision making.

7.20 The methods and results of data collection from the consultation process are not fit for purpose and should not be relied upon. The questions put to the public produced responses that were open to interpretation. The responses may have been influenced by the misleading and biased graphics and illustrations. In particular the questions asked at the 2016 exhibition focused on collecting data on how the information was presented and omitted questions on the design and whether it was what the public wanted. Support expressed for a flood protection scheme at Whitesands does not necessarily equate to support for the scheme proposed.

Written submissions from objectors

7.21 Many of the written objections advanced similar arguments to those parties who were heard at the inquiry, those individual objections are therefore not summarised separately. The majority raised the following issues:

- The council has failed to properly and fully consult the public, local businesses and community groups. There should have been formal consultation with the businesses directly affected.
- The consultation process was flawed. It did not allow consideration of alternative options, other options were described but only one design was pursued and consultation only allowed minor changes to a fixed design. It did not give an option to reject the scheme. The visualisations were inaccurate, misleading and not a true representation of the scheme.
- Information on the scheme has been difficult to obtain and documents were absent from the consultation website.
- The council has not listened to the views and concerns of the public which is overwhelmingly against the scheme.
- The petition containing around six thousand signatures has been disregarded.
- The council is supposed to represent the public and should therefore concede to local opinion.
- The scheme is being forced on the public against their wishes.
- The council believes that it knows best but experience of other schemes indicates otherwise.

7.22 The following objectors raised additional detailed points:

J. B. Ferguson (Objector No 282) The creative approach to consultation resulted in positive responses that bear no resemblance to the public opposition to the scheme.

G Hodge (No 290) The council's consultation process put the onus on the public to extract critical information from reports on the website. This has not facilitated understanding by laypersons of the scheme and the associated documents.

J. Kennedy (No 330) The council has not engaged fully with the community in developing the proposals instead it has undertaken an information campaign comprised of presenting a single fully formed design option and building a record of positive comments to demonstrate community support. This was not a participatory process where the public could influence the design of the final scheme. This is illustrated by the similarity between the original 2006 sketch design and the current proposals.

M. MacBeth (No 333) The council has not provided consultation material for ethnic minority groups a number of the businesses affected by flooding at Whitesands are owned by those in the ethnic minority community.

L. Maxwell (No 259) The consultation was a waste of time as nothing has changed.

J. Parks (No 287) The tick boxes on the feedback forms were tailored to provide positive responses and did not facilitate negative feedback.

Ruthwell & Clarencefield Community Council (No 289) The purpose of consultation is to gather and take into account the views and opinions of those being consulted. The conduct of this project illustrates that there is little value in the consultation undertaken, responses that the council does not like are being ignored.

Dr. F. Waite (No 322) The consultation process was not as helpful as it reasonably should have been. Requests for information did not receive adequate responses and the public were expected to decipher very technical data without assistance. The process could not be considered as consultative.

E. Wilson (No 331) The council may have met its legal obligation to consult on the scheme but the fragmentation of information across many documents made it practically inaccessible and required a level of understanding beyond the scope of the general public. It was too complex to allow the public to evaluate and make meaningful comment.

Case for the Council

7.23 The council's position is set out in its [inquiry statement on community engagement](#), in the precognitions of [Jason Syers](#) and [Michael Smith](#) and in its closing submission.

7.24 The council has sought input and feedback on the scheme through comprehensive and extensive consultation undertaken at all key stages in the project from 2011 to 2017. The engagement process sought to maximise attendance and feedback. A wide range of people and organisations were invited to participate including community groups, schools, local business owners and the wider public. Formal events were well attended and material and questionnaires were available online for those who could not attend. Consultation has been on a regular basis and included a week long charrette in 2012, various drop-in public displays and presentation events and the construction of a full scale model of an embankment and wall at the Whitesands in January 2015. Section 5 of the Community Consultation Report provides a timeline of consultation events and committee approvals. On average there have been at least two events held every year since the charrette. Examples of the methods of engagement used are set out in paragraph 2.2 of the precognition of Michael Smith and the key events are listed in paragraph 3.2.

7.25 All of the events held were advertised in the local press, through social media and by notices placed in Dumfries town centre and on the Whitesands. The events ran for a few days and where possible included a late evening session and a weekend. They were staged at accessible venues and council staff and partners were in attendance to facilitate and to assist with any questions or issues. The questionnaires ([January 2015](#), [October 2015](#), and [November 2016](#)) were designed to enable all views to be submitted and included an 'open comment' box. All feedback was recorded, every questionnaire was included in a comprehensive analysis and comments were reported to the appropriate committee for consideration.

7.26 The methods used have reflected current best practice and involved staff that were experienced in that field. The public and wider stakeholder engagement took a variety of formats which included interactive workshops, interactive display boards and a 3D computer model, which attempts to convey a 360 perspective, virtual reality representation of the scale and massing of the proposed design. The use of charrettes as a means of community engagement is well established throughout the UK and is recognised in the National Planning Framework 3 as a preferred process. It is a transparent, robust and inclusive process.

7.27 The charrette included a specific session for traders to attend. Throughout the subsequent engagement businesses not only on the Whitesands, but throughout the town, were able to attend events and provide feedback. There were also presentations made to the Dumfries Town Centre Forum which has numerous business groups among its make-up. Whilst there has been strong opposition from a small number of businesses on the Whitesands and Friars Vennel this only represents a small percentage of the businesses in the town as a whole.

7.28 The flooding studies of 1988, 2007 and 2011 were used to inform the various scheme options discussed at the consultation events. The charrette considered a variety of alternatives and solutions for the flood protection measures, at a formative stage, and considered the risks and changes that would be brought about by each proposition. The discussions on the potential flood protection options were then developed through open discussion and an ideas workshop.

7.29 As part of the public engagement in October 2015 consideration was given to the self-rising barrier which had been suggested in earlier feedback as an alternative to the proposed scheme. The raised walkway and the self-rising barrier alternative were displayed with detailed images and costings as part of the formal public engagement. As part of that process engagement was undertaken with suppliers of flood protection barriers, including self-rising barriers. The main aim of that event was to explain how the preferred scheme met the requirements and aims of the project and to illustrate how other options had been fully investigated but did not meet those requirements.

7.30 The proposition which emerged and was developed through the charrette was shaped and the final conclusions were used as the preferred solution in subsequent community engagement. Amendments were clearly articulated to the public through drawings, sketches and presentation and the opportunity for discussion and feedback was allowed at each stage.

7.31 Critical comments made at the 2013 public engagement event generally related to loss of parking and the impact that disruption from construction would have on the viability of local businesses. The proposals were refined to include the provision of replacement car parking and the reduction of disruption during construction as far as reasonably practicable. The comments received during the 2014 consultation exercise again largely focused on the same concerns. The feedback from the engagement event was that the embankment was too high, this led to a redesign of the scheme reducing the overall height of the embankment to no more than 1.4 metres incorporating a glass wall and, where required, demountable panels.

7.32 Following feedback from the community engagement all views expressed were considered and the scheme was altered and improved. The amendments made to the

design sought to address the main concerns raised by the local community within technical, budgetary and other constraints, while achieving an appropriate level of flood protection. It blended and balanced people's aspirations for the Whitesands against the associated risks, technical constraints and guidance from statutory bodies.

7.33 The council acknowledges the objections but does not accept that they represent the views of the community as a whole. Significant positive support for the scheme was expressed through the public consultation process. Although objectors point to the fact not everybody in the town attended the charrette, almost everyone in the town had the opportunity to do so as it was widely and extensively publicised. The 500 or so that did attend during the week actively participated in the production of the final plan.

7.34 After every event all materials used and feedback received were available to view. All feedback was recorded, analysed and presented to the appropriate committee to allow well informed decisions to be made and has led to numerous alterations and improvements to the scheme. There is clear evidence the decision makers had been fully informed of feedback before taking the decision. The council has considered and responded to the objections that were made prior to its preliminary decision to confirm the flood protection order. The engagement process has therefore allowed adequate time for consideration and response and has been meaningful.

7.35 In June 2015 a petition was received by the council from the Save Our Sands group which contained 5,500 signatures to 'save our car park and river views'. This was reported to the Nithsdale Area Committee in September 2015 with the following statement 'The council acknowledges that there is strong feeling about the loss of parking associated with the development of the Whitesands Project and the loss of views due to the nature of the design presented to Committee in December 2014 and consulted publically in January 2015. The clear messages from the petition, have and will continue to, give direction to the way forward in the design and associated further consultation'.

7.36 Whilst the design principles have not changed, the reduced scale and the height of the proposed structure demonstrate that the council has listened to the wider community, has responded pro-actively to people's concerns and that the consultation has been a success. The objections led to the revised height of the solid defence for the raised walkway and to the efforts made to replace all the parking.

7.37 There may be a number of reasons why suggestions made in the course of consultation have not been adopted but this does not mean that the consultation has been ineffective or that the suggestions have been ignored, a balance had to be struck of competing issues.

7.38 The contention made by Mr Coulter on behalf of Save Our Sands that it is inappropriate to give weight to the views of the wider community as the focus should have been on businesses at the Whitesands is not accepted. The notion that a major project such as this could be planned and constructed by consensus is unrealistic.

7.39 On the 1 February 2017 the Whitesands Project was formally published. This is the only statutory consultation expressly required in accordance with the 2009 Act. The Statutory Consultees were, notified in accordance with the requirements of the Act. Community Councils and other known groups such as the Port of Dumfries Development Group and Save Our Sands group were also sent formal notices. The council made all statutory documents and numerous supporting/explanatory documents available online.

Following publication of the order an error was discovered in the uploading of one of the documents. The council corrected the error and agreed to restart the 28 day period from that date. Any bodies or persons who had already submitted objections were advised and asked if they wished to review and resubmit any representation. The consultation on the scheme was substantially greater than that for other comparable schemes in Scotland and went well beyond the legislative requirements of the Act.

7.40 Even though the National Standards have been adopted by the council they are discretionary and not a statutory requirement. Nevertheless the council considers that it has satisfied the good practice principles set out in those standards. Arnstein's Ladder of Citizen Participation is not an industry standard for community engagement. The engagement undertaken was entirely in accordance with current trends and Scottish Government guidance.

7.41 Irrespective of the above the matter of community engagement is not a relevant or material consideration for Ministers in determining whether or not to approve the scheme.

Reporters' Conclusions

7.42 There is clearly disagreement between the council and the objectors regarding the adequacy of the community engagement that has been undertaken.

7.43 We have addressed the requirements of the 2009 Act in relation to the Order in chapter 1 of our report. We note the concerns raised by objectors that the consultation process involved a number of highly technical documents and reports. The information was made available in various other formats that simplified matters and council staff and consultants had previously been in attendance at engagement events in order to explain technical issues. We do recognise that some parties felt frustrated by the formal consultation process, however the inclusion of highly technical information is unavoidable in such a specialised and complex matter. The council would almost certainly have been criticised if it had not made such information available to support the scheme.

7.44 Section 6 of 'Delivering Sustainable Flood Risk Management' (2011) sets out the Scottish Government's guidance on engaging with stakeholders in relation to flood risk management. It indicates that engagement with interested parties should aim to gain a sound understanding of local issues and an appreciation of the concerns of individuals, communities and businesses potentially affected, as well as more strategic and national perspectives.

7.45 Paragraph 6 of SPP indicates that throughout the planning system opportunities are available for people to engage in decisions that affect them, such engagement should be early, meaningful and proportionate. Planning Advice Note (PAN) 3/2010 'Community Engagement' provides guidance to communities on how they can get involved and advice to planning authorities on ways of effectively engaging with communities on planning matters. In the context of the PAN engagement is considered to amount to giving people a genuine opportunity to have a say on a plan or proposal which affects them; listening to what they say and reaching a decision in an open and transparent way taking account of all views expressed. The policy contained within SPP and the advice in the PAN relates to the development plan and planning application processes, however the advice can reasonably be translated to other local authority projects such as the flood protection scheme.

7.46 In this case engagement and publicity occurred from an early stage in the development of the scheme. There has been a number consultation events over the years. The evidence indicates that the council sought to make these events widely known, that they were held at central, accessible locations and at a range of times and dates in order to encourage attendance. Information was also available online for those who were unable to attend. The consultation process involved not only the general public but also community councils, local businesses and key agencies. The consultation process included the opportunity for feedback and representations. All representations have been made available online and the council has responded with comments to the matters raised.

7.47 The council has clearly consulted widely and has involved the public at various stages in the development of the proposed scheme. There have been a number of opportunities for the public and local businesses to provide their views and many have done so. The councillors have been made aware of the material used in the consultations and the feedback received. The council was well aware of the strength of public opinion but took the decision to proceed with the scheme; that is not the same as ignoring the opposition to it.

7.48 Some criticism has been made of the charrette and the questionnaire forms used to obtain feedback. A charrette is a widely recognised means of public participation. SPP describes charrettes as an innovative approach tailored to unique circumstances. In our view it was an appropriate means of community engagement for the council to have adopted in this instance. We understand why some people found fault in the questionnaire forms, in particular the use of red and green and ticks and crosses and the wording of questions. Nevertheless they did not thwart people from reaching their own conclusions and all of the questionnaires included blank comments boxes to allow open comments to be made. We are content that people were not prevented from making their views known and had adequate opportunity to do so. We acknowledge that support expressed for a flood protection scheme at Whitesands does not necessarily equate to support for the scheme proposed. It is clear to us that the councillors voting on this issue over the years had been made well aware of the opposition to the scheme before reaching a decision.

7.49 The consideration given to other options is addressed by us in chapter 3 Technical Matters where we noted that a variety of options have been assessed. It is inaccurate to state that other options have not been considered and that there is no evidence of an options appraisal.

7.50 The amendments made to the scheme and the provisions for replacement parking indicate that feedback was, at least to some extent, taken into account. We accept that the engagement process has changed the details of the design but not the basic flood protection strategy. There is clearly a profound and genuine disagreement over the strategy; the objectors attach more weight to parking and visual impact than the standard of flood protection proposed. However the decision by the council to pursue the flood protection scheme in the face of legitimate disagreement does not indicate that there has been a lack of community engagement or that public opinion has been entirely ignored.

7.51 For the reasons set out above we do not believe that the criticisms of the council by many of the objectors are fair. In our view, what the council has carried out over several years is consistent with the relevant Scottish Government guidance detailed above and is consistent with the policy and advice on community engagement set out in SPP and

PAN 3/2010. We are satisfied that the council has followed accepted practice and has been inclusive in its approach to consultation on the scheme.

7.52 We heard evidence that the council has reviewed the consultation process. The details of such consideration and any lessons that it may have learned for the future are not relevant to our consideration of the scheme.

7.53 We have considered consultation in relation to the relocation of the Rood Fair and the traffic management changes in chapters 6 and 8 where we conclude that these are issues that would be dealt with separately from the consideration of this scheme.

7.54 We have been made aware of the petition organised by Mr Slater on behalf of Save Our Sands, the petition organised by Oliver Mundell MSP, the social media support for Save Our Sands and the over 300 formal objectors to the scheme. We accept that these show a significant body of opinion against the proposals. It is impossible for us to know the views of those who did not object, we cannot determine if they are supportive or indifferent. We are also aware that public opinion can change over time depending on perception and experiences. It is possible that different views might have been expressed if Dumfries had experienced a 1 in 75 event recently.

7.55 We recognise the difficulties faced by the council in trying to address the main concerns raised by the local community within technical, budgetary and other constraints, while achieving what is considered to be an appropriate level of flood protection. We consider that it is not reasonable to expect that a project should not proceed unless there is consensus on all matters. The council has a statutory duty to reduce flood risk and ultimately had the responsibility to decide whether or not to promote the flood protection scheme. Although there may have been things that could have been done differently to alter the public's perception of the process, we are satisfied that it is unfair to describe the community engagement as fundamentally flawed.

7.56 The National Standards for Community Engagement sets out good practice principles to support and inform the process of community engagement. They are not expressed as a series of precisely specified actions that must be followed. The same applies to Arnstein's Ladder of Citizen Participation. The council believes that it has complied with the good practice principles set out in these standards. Save Our Sands and other objectors sincerely believe that it has not. It seems to us that Save Our Sands believe that had the council adopted a different approach a different scheme would have been forthcoming. We cannot accept that this would necessarily have been the case. It is our view, that for a technically complex project inevitably resulting in difficult trade-offs, it is unlikely that a consensus would have been reached on any scheme, even if the council had adopted different methods of community engagement.

7.57 Irrespective of the above it should be acknowledged that consultation is a means to an end and not an end in itself. We consider that the 2009 Act does not specifically make provision for the community engagement as a valid consideration for Ministers in determining whether or not to approve a flood protection scheme, aside from the statutory requirements. There is no doubt that the council has fulfilled the requirements set out in the 2009 Act and associated regulations. However, in reaching an overall balanced decision, if Ministers are persuaded by the arguments put forward by the objectors then it would be open to them to not confirm the order.

CHAPTER 8 Modifications, Conditions and Other Matters

8.1 A hearing session was held on 7 December 2018 to consider modifications, conditions and other matters. In addition to the council and Save Our Sands participants in that hearing included representatives from SEPA, SNH, Scottish Water, HES and Mr Darren Miller, an individual objector.

8.2 Hearing statements on these topics were submitted by the [council](#), [Save Our Sands](#) and [Darren Miller](#). Evidence is also included in the closing submissions from the council, Save Our Sands and Morton Fraser. Some additional evidence regarding the need for conditions relating to the river walls was noted in the submissions from Save Our Sands on technical matters. Some of the points discussed under other matters had previously been raised in inquiry sessions on impacts on the town centre, tourism and parking and are addressed in chapter 6 of our report. In this chapter of our report we also address some other matters that have not been incorporated within other chapters.

A. Modifications

Save Our Sands

8.3 The first preference of Save Our Sands is that the scheme should be rejected. To confirm the scheme with modifications is one of three outcomes open to the Scottish Ministers. There is no definition or limit relating to a modification specified in the legislation, the decision on what may constitute a modification is at the discretion of the Ministers.

8.4 The Ministers have the power under the 2009 Act to re-advertise any modifications. The re-advertisement of the proposed modifications would be likely to result in fewer objections.

8.5 A full and fair options appraisal needs to be carried out between the proposed scheme and the proposed modifications.

It is requested that the following modifications are made to the scheme:

- That the scheme is amended to replace the 'bund' component from the design and replace this 450 metres with a more acceptable and less permanent solution such as a self-rising barrier. This should be considered as a modification since it only alters one part of the design and other parts of the scheme include a wall.
- That the Devorgilla Bridge and its setting are protected and no flood protection design component should touch or interfere with the bridge structure and setting.
- That the recommended remedial works to the Greensands and river walls shall be implemented as part of the capital project to ensure the 100 year lifespan of the scheme.
- That river views and car parking should remain relatively unchanged.
- That the bus terminus and tourist bus stance should be enhanced rather than removed.

- That the Greensands riverside space should be protected and not used for extra car parking.
- That the D&G Homes site is excluded on strategic planning grounds as it is required for a multi-million pounds development.

Morton Fraser

8.6 It is requested that the scheme be modified to delete option 2c 'silt removal at Devorgilla Bridge' and include Option 6 'local flood defences' as it cannot be argued that there are no viable alternatives to the proposed scheme that would avoid the adverse impacts at Nunholm. This would allow the residents to remove their objection to the scheme. If this modification is not made by the Ministers the scheme should be rejected on the grounds of unacceptable impacts on people and property at Nunholm. Without the modification the scheme is contrary to Section 1(2) (b), (c) (i), (ii), and (iv) of the 2009 Act.

SEPA

8.7 Even if no modifications are made to the scheme by the Ministers there may be some minor alterations required as a result of SEPA's regulatory processes.

Scottish Water

8.8 Any modification to the scheme may result in modifications to Scottish Water's infrastructure, however it has its own statutory powers to deal with any such changes.

Scottish Natural Heritage

8.9 Any modifications would need to be reconsidered in their own right to determine if they had any impacts that had not previously been thought about and if these required any mitigation.

Historic Environment Scotland

8.10 Any modifications would require to be considered in terms of potential impacts and mitigation.

Council

8.11 Regulation 7 (4) of Schedule 2 to the 2009 Act allows modifications to a scheme. There is no guidance in case law on modifications to a scheme, however it is considered that modifications should be confined to minor and precisely expressed changes. Anything substantially or materially different to the scheme under consideration is not permissible. The modifications proposed do not meet such criteria.

8.12 The scheme has been designed as a coherent whole, it is not practical, desirable or legally competent, to alter parts of it as suggested to replace the bund with a wall or to retain river views, parking and the bus stance. It is not considered appropriate to delete the D&G Homes site from the scheme. It would not be competent for Ministers to impose a modification requiring unplanned and unknown flood protection works at Nunholm or to replace the bund with a self-rising barrier.

8.13 The proposed modifications have not been precisely specified or analysed in detail, it is not appropriate for general statements to be treated as modifications.

Reporters' Conclusions on Modifications

8.14 We have considered the proposals from the objectors relating to a self-rising barrier, the remedial works to the river walls and local flood protection at Nunholm within chapter 3, we also address the culverted watercourses noted by Mr Darren Miller in that chapter. We therefore do not give further technical consideration of those matters within the present chapter.

8.15 Regulation 7(4) of Schedule 2 of the 2009 Act makes provisions for a flood protection scheme to be either confirmed without modifications, confirmed with modifications or to be rejected. It also includes, where the Ministers decide to confirm the scheme with modifications, a requirement for notice of the modifications to be given to relevant objectors and anyone else that the Ministers consider may be affected before the scheme is confirmed. It does not, however define or specify what may constitute a modification. We consider that there are limits to what may constitute an appropriate modification. We consider each of the modifications proposed in the following paragraphs.

8.16 The proposed replacement of the earthen bund with a self-rising wall has not been subject to detailed scrutiny by either the council or the objectors. We have been made aware of examples of such barriers that have been successfully implemented elsewhere. However we not been presented with evidence on the technical feasibility or likely cost of such a barrier at Whitesands. As indicated in chapter 3 a self-rising wall that would provide a 1 in 75 years standard of protection would not be without difficulties. Without further technical evidence on this proposal we do not consider that it may be considered as a modification to the scheme before us.

The modifications sought to exclude works to Devorgilla Bridge, the proposed parking at Greensands, the alteration to the bus stance and the use of the D&G Homes site all relate to matters that are intrinsic to the proposed scheme. These could not be excluded without the scheme having to be redesigned. We therefore consider that these requested modifications would be in direct conflict with the scheme as proposed and may not be considered as modifications.

8.17 We address the impacts on river views in chapter 4 and impacts on car parking in chapter 6. We have concluded that there will be some loss of river views and that there would be a net loss in the quality of parking as a result of the scheme. The requested modification that river views and car parking should remain relatively unchanged is not possible to achieve without redesigning and changing the substance of the scheme. We therefore conclude that these requested modifications would also be in direct conflict with the scheme as proposed.

8.18 In terms of the requested flood defences at Nunholm the submissions included evidence of flooding of individual houses and gardens and flooding of the road, footway and substation at the low point on Nunholm Road. We have not been provided with any detailed consideration of what a scheme of local flood defences at Nunholm would comprise or what this might cost. We have not been provided with any assessment of the level of protection that could be achieved here or the environmental impacts of those works. It is clear that additional flood protection at this location would be well out with the spatial

extent of the scheme currently proposed. In addition to a lack of technical evidence to support the proposed modification we consider that it is out with the scope of our examination.

8.19 Although the 2009 Act, as noted at paragraph 8.15 above, allows for advertisement of modifications we consider that the scope and nature of the modifications sought are such that parties not originally notified by the council may be disadvantaged by only being notified at this stage, having been excluded from the public inquiry process.

8.20 It is our view, overall, that the modifications proposed would be fundamentally different in terms of the nature of the scheme, its geographical location, spatial extent and potential impacts. Furthermore, the potential impacts of such modifications have not been investigated, modelled and assessed in any depth by the council and are not before us in sufficient detail for us to consider. We therefore agree with the council that the modifications specified by Save Our Sands and Morton Fraser would go beyond what may be reasonably considered to be a modification to the scheme.

8.21 Consequently in our opinion it would not be competent for those changes to be treated as modifications. In that case if the Ministers are persuaded by the case put forward by the objectors then the scheme would need to be rejected.

B. Conditions

8.22 Most of the differences in position between the council, Save Our Sands and Morton Fraser in relation to the proposed conditions are fundamental rather than minor style related matters.

8.23 We have considered the proposed conditions in the context of the guidance contained within [Circular 4/1998 'The Use of Conditions in Planning Permissions'](#) which sets out the government's policy on the use of conditions. Essentially conditions should meet a number of tests, namely that they are necessary; relevant to planning; relevant to the development to be permitted; enforceable; precise, and be reasonable in all other respects. We have also taken into account the consultation responses from the key agencies noted above.

Generalities

Morton Fraser

8.24 The defects in the scheme cannot be overcome by the imposition of conditions, in any event enforcement of conditions would be a matter for the council and is discretionary.

Reporters' Conclusions

8.25 We have addressed the issue of impacts of the scheme on the Nunholm area and the matters of localised flood protection in chapter 3 of our report. In that chapter we do not reach the conclusion that there are defects in the scheme that cannot be overcome by the imposition of conditions. We therefore disagree with the position taken by Morton Fraser in relation to that matter. We are aware that the enforcement of conditions would be a matter for the council and is discretionary. That does not mean that there is no reason to impose any conditions. We address the discharge of conditions below.

Consideration of the Council's Proposed Conditions

8.26 The planning conditions proposed by the council were contained within its hearing statement. The key agencies present at the hearing all indicated that they were generally content with the scope of the proposed conditions. The points raised in discussion in relation to the conditions proposed by the council are summarised in the following paragraphs.

(i) Planning Monitoring Officer

Save Our Sands

8.27 The planning monitoring officer (PMO) should be employed by the Scottish Government client division rather than the council. There should be a role for the community such as a formal community liaison group and the PMO should report to that group and the client division as well as the council.

Council

8.28 The PMO would impose a degree of compulsory independence and would provide a further check on compliance with conditions. The additional reporting to a community group is not considered necessary.

Reporters' Conclusions

8.29 This condition is offered by the council and is not opposed by the other parties. The council's desire to bring a degree of objectivity to the process through the appointment of a PMO would perhaps address some of the public scepticism relating to its ability to successfully deliver the scheme. However we do not consider that it is necessary for there to be a condition requiring this as the council is the promoter of the scheme and in an event would have to monitor its own contractors. It also has a statutory duty for planning enforcement. We have therefore not included this condition in our proposed list, nevertheless the Ministers may take an alternative view.

8.30 We do not find any justification for the condition to requiring that the PMO appointed by the council must report to the community liaison group. We consider the condition requiring a community liaison group in paragraph 8.39. As noted above the responsibility for compliance with conditions rests with the council. We would expect that the communications between the council and any liaison group would allow such matters to be discussed and addressed, however statutory responsibility would remain with the council.

(ii) Phasing

Save Our Sands

8.31 All, rather than the majority of the replacement parking should be in place prior to the commencement of works on the scheme.

Council

8.32 The wording of the proposed condition seeks to address the loss of parking from any phase, including any which might be temporarily unavailable.

Reporters' Conclusions

8.33 We considered impacts on parking in chapter 6 Impacts on the Town Centre, Tourism and Parking where we concluded that, overall, there would be a net loss in the quality of parking as a result of the scheme. We found that the replacement parking would be less conveniently located and it would not be as appealing to all sectors of the population as the existing parking. However the council is clearly committed to providing replacement parking and we do not consider that it is reasonable to impose a requirement via this condition that all replacement parking provision is in place prior to the commencement of any works. We are satisfied that the condition as proposed by the council would allow a degree of flexibility to allow time for it to make provision for the alternative car parking which it is required to deliver under the terms of this condition.

(iii) Design Approval

Save Our Sands

8.34 The council should not discharge or enforce the conditions on its own scheme. The community liaison group should have a role in the approval of details that is required prior to the commencement of any phase.

Council

8.35 Although Save Our Sands has concerns regarding the council approving the further details of the scheme it is not unusual for local authorities to also be developers. It is considered unnecessary for a community liaison group to have a role in that process.

Reporters' Conclusions

8.36 It is normal for such a condition requiring the submission and approval of details to be submitted to and approved by the planning authority, even where the council is the developer. The approval of such details would require to be made efficiently by those parties within the council who have the appropriate expertise and in consultation with HES. The role of the council as expressed in statute should not be shared with other parties such as any community liaison group. We therefore consider that the amendments proposed are not reasonable or necessary.

(iv) Community Liaison Group

Save Our Sands

8.37 Welcome the condition and consider it necessary to secure the existence of the group and ensure that it has a satisfactory role. The group should have an equal and meaningful status as decision making partner with the council. It should have a remit over the 100 years lifespan of the scheme allowing them to participate fully in the construction

process and in the compliance with conditions. The group should be resourced for administrative purposes.

Council

8.38 This condition enables the function and role of the group to be defined. The purpose of the group should relate to the exchange of information only. Technical decisions must be taken within contractual timeframes by those within the council who are competent to make them, the additional decision making role proposed is therefore not acceptable. The group should only have a function during the construction process, after the scheme is constructed the statutory duties of the council to maintain the scheme come into play. The enforcement of conditions is addressed by the proposed conditions relating to a PMO and ECoW. It is not necessary to give the community liaison group decision making powers, to do so would be contrary to established democratic process.

Reporters' Conclusions

8.39 This condition is proposed by the council, is welcomed by the Save Our Sands group and not opposed by any other party. As with the condition relating to the PMO the establishment of a community liaison group may provide a degree of comfort to the public. However in this case, as the council is the developer a condition is not necessary to ensure that a community liaison group is established or to secure its remit. We are satisfied that the council can establish such a group without a condition and would encourage it to do so. In addition, once the scheme moves into the post construction period, as noted above the council has a statutory duty to maintain the scheme. Beyond the construction period the public would still have the ability to communicate with the council regarding maintenance or any issues that may arise. In our view the condition and the amendments proposed by Save Our Sands would not meet the tests of necessity or reasonableness. We have therefore not included this condition in our proposed list, nevertheless the Ministers may take an alternative view.

(v) Landscaping

Save Our Sands

8.40 This condition is welcomed otherwise the landscaping might not happen or be maintained to the satisfaction of the community.

Council

8.41 This condition is necessary to ensure that a detailed landscaping specification is provided and that the requirements are made precise. It follows the concerns regarding maintenance issues. In particular part (3) of the condition requires replacement planting in the event that any of the proposed planting dies or becomes damaged or diseased.

Reporters' Conclusions

8.42 There is no dispute regarding this condition. We have proposed a minor alteration to part (2) to clarify the timeframe within which the condition requires to be implemented in order that the condition meets the tests of preciseness and enforceability.

(vi) Ecological Management Plan

8.43 There were no comments from any parties on the council's proposed condition.

Reporters' Conclusions

8.44 We consider that it is more appropriate that this condition be combined with the condition relating to European Protected Species. We have proposed a minor alteration to clarify the timeframe within which the condition requires to be implemented.

(vii) Construction Method Statement

8.45 Following discussion, the parties indicated that this could be amalgamated with the previous condition requiring the ecological management plan.

Reporters' Conclusions

8.46 We consider that it is more appropriate that this condition be combined with the condition relating to the construction and environment management plan.

(viii) Ecological Clerk of Works (ECoW)

Save Our Sands

8.47 This person should be recruited from out with the council and possibly accountable to the Scottish Government in order that they are independent. They should also report to the community liaison group and provide them with the required monthly reports.

Council

8.48 There is no requirement for the ECoW to report to the community liaison group. The person appointed would function independently and in accordance with professional standards.

Reporters' Conclusions

8.49 As noted in relation to the PMO the statutory responsibility for monitoring of the development lies with the council. However we are satisfied that the appointment of an independent ECoW would be appropriate given the nature of the scheme. We are satisfied that the condition proposed by the council appropriately sets out the remit of the ECoW, it is clear what the role of that person would be. It would also be clear from the condition what is expected of that individual. Taking those matters into account we see no justification in amending the condition as proposed by Save Our Sands, the amendments that it proposes do not comply with the relevant tests of necessity or reasonableness. We therefore recommend the inclusion of this condition as proposed by the council.

(ix) Construction and Environment Management Plan

Save Our Sands

8.50 As with the previous condition it is requested that the community liaison group also has a role.

Council

8.51 No comments.

Reporters' Conclusions

8.52 Given our conclusions in paragraphs 8.36 and 8.39 we consider that it would not be reasonable or appropriate to include a reference to the community liaison group in this condition. Our recommended conditions combines the condition with the condition relating to the Construction Method Statement and includes a timeframe within which this condition requires to be implemented.

(x) Construction Traffic Management Plan

Save Our Sands

8.53 Approval of the plan should also be subject to consultation with the community liaison group.

SEPA

8.54 It should be clarified in the condition that there should be no discharges to the water environment. Following discussion the parties were content that the condition be amended to include the requirement for the plan to be approved by the council in consultation with SEPA.

Reporters' Conclusions

8.55 Given our conclusions in paragraphs 8.36 and 8.39 we consider that it would not be reasonable or appropriate to include a reference to the community liaison group in this condition. We have proposed a minor alteration to include a timeframe within which the condition requires to be implemented. We consider that any discharges to the water environment would be addressed by the condition relating to the Construction and Environment Management Plan, the wording of that condition as proposed by the council includes the requirement for the plan to be approved by the council in consultation with SEPA.

(xi) European Protected Species

8.56 No comments were made by any parties.

Reporters' Conclusions

8.57 As noted in paragraph 8.44 above our recommended conditions combine the requirements relating to European Protected Species with the condition relating to the ecological management plan.

(xii) Archaeology

8.58 The parties agreed that the condition be amended to include the requirement to consult HES and to include an implementation requirement.

Darren Miller

8.59 In terms of archaeological requirements the council should take a wider view and include Whitesands public toilet, the Sandy Opening and the culverted watercourses.

Reporters' Conclusions

8.60 We see no reason not to agree with the parties that the condition should be amended to include the requirement to consult HES and include an implementation requirement. The condition as worded requires a scheme of archaeological investigation for the site. This does not preclude the additional areas referred to by Mr Darren Miller, those being the public toilets, the Sandy Opening and any parts of the culverted watercourses that may be affected by the scheme.

(xiii) Monitoring of Accumulation under Devorgilla Bridge

Save Our Sands

8.61 This condition is completely opposed as it would not address the issue at Nunholm. If such a condition is to be included it must be much more clearly worded, it must include a baseline position and clear trigger points for when work would be undertaken and the requirement for regular monitoring throughout the lifetime of the scheme. It should also include the requirement for it to be agreed by residents at Nunholm. The condition as worded only states that sediment will be regularly monitored. There has to be a clear statement of how sediment would be managed. It would be preferable if a commitment was included to annual sediment removal. The need for this condition would be avoided if protection at Nunholm is provided before the scheme goes ahead.

Morton Fraser

8.62 This condition merely requires the council to prepare proposals to monitor and remove sediment and to submit these to itself. There is no obligation for implementation. The condition is imprecise and open ended, it is considered that a more precautionary approach is required and that it should include reference to the consents that are likely to be required from SNH, SEPA and HES. It is noted that the conditions relating to the planning monitoring officer, ecological clerk of works, community liaison group, the construction and environment management plan, construction traffic management plan and European Protected Species only relate to the construction period and do not address any future sediment removal.

Historic Environment Scotland

8.63 Also notes that an implementation requirement has been omitted. It should be noted that any future sediment removal may require a separate application for Scheduled Monument Consent.

SEPA

8.64 Although the CAR license is likely to address this it would be worth noting that, in relation to monitoring, it will look to the justification for any sediment management in the future.

Council

8.65 Seek that the condition be accepted as proposed. Once sediment is initially removed, as we heard in evidence on technical matters, it is expected thereafter to be a simple exercise. The council is committed to the removal of the sediment berm. It has a legal duty to maintain the flood prevention works and will meet its statutory obligations.

8.66 The parties agreed that if this condition is accepted then it should be amended to include the requirement to consult HES.

Reporters' Conclusions

8.67 We address these mitigation works in chapter 3 where we concluded that any further sediment removal that may be required in the future would fall within the council's ongoing statutory duties relating to flood risk management. However, we considered it would be prudent to include a condition requiring that the council implement the mitigation measures at Devorgilla Bridge. We have therefore amended the council's proposed condition accordingly. The need for any further consents or licenses that might be required for these works is a separate matter and we do not consider that it is necessary to amend this condition to make reference to those.

Additional Conditions

8.68 We have considered the additional conditions proposed by Save Our Sands and have also reviewed those proposed by the council to determine whether any further conditions would be appropriate.

Save Our Sands

8.69 Should the scheme be approved then additional conditions are sought to address the following matters:

- That the deemed permission should be given in principle only and the council should be required to submit a detailed planning application in order that the community can be consulted on the outstanding matters. That the detailed proposals are subject to the requirement for advertisement and 28 days period for objections.

- It is inappropriate for the council to discharge the conditions attached to any deemed permission and to be responsible for any enforcement action. The Scottish Government should retain that role, preferably in conjunction with the community.
- That as the scheme develops the council would be required to display effective and meaningful compliance with the National Standards of Community Engagement.
- The council should publish and agree a full ongoing short and long term maintenance schedule for the completed scheme, including glass cleaning and litter picking. That a budget commitment is made to a cost figure for the ongoing maintenance of the scheme for its 100 years lifespan and this shall be ring fenced. This follows from the comments made in evidence by one of the council's witnesses (Mr McLeod) that the integrity of the scheme is the more important than its cosmetic maintenance.

Council

8.70 There is no basis for deemed permission to be given in principle. The council is obliged to maintain the scheme. Such a condition would duplicate that and would not meet the test of necessity.

Reporters' Conclusions

Deemed Permission

8.71 Section 65 of the 2009 Act makes provision for deemed planning permission to be granted. It, quite simply, does not make any provision for permission to be granted in principle. In our view it is completely unrealistic to seek that in principle permission is granted for a flood defence scheme. Furthermore an in principle permission would unnecessarily prolong the approval process and delay the implementation of the proposed scheme. We are satisfied that the scheme has been designed in sufficient detail for us and the Ministers to consider it. We do not consider that any additional conditions are required in relation to these matters.

Discharge of Conditions

8.72 We agree that it is not unusual for a planning authority to also have the role of developer. It is also common practice for conditions requiring the submission and approval of further details to be imposed on planning permissions granted by the council in such cases. It is normal for the fulfilment of conditions on any planning permission, not just those granted in favour of the council, to not involve any formal consultation with the public. We therefore do not accept that an additional condition to address this matter would be necessary or reasonable.

8.73 Although in practice it is highly unlikely that a planning authority would resort to taking formal enforcement action against itself we are content that any issues that may arise relating to the compliance with conditions could be addressed without requiring enforcement action. The council is publically accountable and the community may pursue any failure by the council to discharge its duties through the ombudsman or ultimately the courts. We do not accept that the discharge of conditions should be the responsibility of a community liaison group or the Scottish Government and do not recommend an additional

condition to that effect. Furthermore there is no provision in law for the responsibility for enforcement to be the remit of community groups.

National Standards of Community Engagement

8.74 Save Our Sands have proposed that a condition be imposed requiring that, as the scheme is developed, the council must adhere to these standards. We have addressed this matter in detail within chapter 7 Community Engagement. The national standards are a set of good practice principles rather than being precise, measurable or quantifiable standards. We therefore consider that such a condition would not meet the tests of being necessary, enforceable, precise, reasonable and relevant to planning or to the development.

Maintenance of the Scheme

8.75 As we have also noted in chapter 3 the council has a statutory duty to maintain the scheme. We also noted that there are likely to be potentially serious consequences should the council fail to do so. To add a further condition requiring the council to commit to the cost of those works would duplicate the statutory requirements and does not meet the tests of necessity or reasonableness. A condition requiring the council to publish its long and short term maintenance schemes would similarly not be reasonable. It is likely that the level of maintenance that would be required would vary over the 100 years lifespan of the scheme and could not be fully predicted at this point in time. Such a condition would therefore also be difficult to frame in a precise and enforceable manner. Consequently we do not propose to add a condition to address this matter.

C. Other Matters

(i) Fair and Charter Rights

Save Our Sands

8.76 The council has made no provision for the twice yearly 'Rood Fair', which currently takes place at Whitesands, to be accommodated; the fair has Charter Rights going back hundreds of years. Any temporary or permanent alternative site has to be established through a proper process such as a planning application involving notification of neighbours. Alternative sites would be unlikely to be acceptable due to noise and disruption to residential properties. There has been no consultation with communities that are likely to be affected. No decision should be made to confirm the order until the issue of an alternative site for the fair is resolved.

Council

8.77 Any relocation of the fair would not go through the planning application process as temporary uses do not require planning permission.

Reporters' Conclusions

8.78 We considered the potential relocation of the fair in chapter 6 and concluded that the appropriateness or acceptability of the alternative site is a separate matter and is not material to the consideration of the scheme.

(ii) Land Ownerships

Save Our Sands

8.79 The council has not proven its ownership of Devorgilla Bridge and the Whitesands. The Scheduled Monument Consent application requires notification of the owners of the bridge. If the owner cannot be identified this presents a problem. The Minister should satisfy themselves on this matter before taking any decision to confirm the scheme. It is considered that lack of ownership would be fatal to the process.

Council

8.80 The council is satisfied that it has ownership of Whitesands and Devorgilla Bridge. However land ownership is not a relevant consideration under the Flood Risk Management (Scotland) Act 2009.

Reporters' Conclusions

8.81 Devorgilla Bridge and the Whitesands have existed for many years and it is not unusual for old structures such as bridges and common land not to have a clear or formal title. We believe that this is no reason to assume that the council does not have effective ownership and we have not been made aware of any alternative owners. In any event, even if there were title issues we agree that this matter does not preclude us from reaching a recommendation in relation to the scheme.

(iii) Compensation

Save Our Sands

8.82 The Act makes provision for a compensation scheme to traders affected by disruption and change. To date the ninety one commercial properties potentially affected have had no information relating to compensation. The scheme should be available not just to the commercial and other properties identified as being affected, the owners of residential properties at Nunholm and at Whitesands should also be eligible. The Ministers should recognise that there has been a precedent for this and put in place a mechanism to allow residential properties to be eligible.

Council

8.83 The 2009 Act deals with consequences of the flood scheme. There may have been precedent in relation to the victims of flooding but that is not relevant to the consideration of this scheme.

8.84 There are provisions within the Flood Risk Management (Scotland) Act 2009 relating to compensation payments. The application of those provisions is not a matter for this inquiry.

Reporters' Conclusions

8.85 We have also addressed the matter of compensation in chapter 6 where we note that the 2009 Act makes provisions for compensation payments. In our opinion it would not be

necessary or reasonable to make additional provisions relating to this matter by way of the imposition of an additional planning condition.

(iv) Town Centre Impacts

Save Our Sands

8.86 That the existing report by Ironside Farrar relating to the town centre should be completed and published by the council and if not a condition should be imposed requiring that a retail and business impact study be carried out.

Council

8.87 Such a condition would not be appropriate or necessary at this stage. The report referred to does not relate to the scheme.

Reporters' Conclusions

8.88 In chapter 6 we acknowledge that the council has not undertaken a detailed assessment of the impacts of the scheme on local businesses and the town centre. However we agree with the council that it would be inappropriate to require such an assessment by means of a condition. Should the Ministers be sufficiently dissatisfied with the evidence on that matter it would be open to them to reject the scheme.

(v) Underground Watercourses

Darren Miller

8.89 We know roughly the courses of the underground streams and how they are incorporated into the drainage network but we know nothing of their condition. They have not been investigated since the 1983 Babbie Shaw & Morton report in which they were described as being in poor to fair condition with lots of siltation, low capacities and requiring repairs.

Scottish Water

8.90 Those watercourses may not all belong to Scottish Water and their condition cannot be commented on at this time.

Reporters' Conclusions

8.91 We have considered the issue of underground watercourses in chapter 3 where we concluded that there is no technical evidence indicating that further investigation of those watercourses is required at the current stage. Consequently we find no justification for requiring any further studies at this stage in relation to the flood protection scheme. This would not preclude either Scottish Water or the council from undertaking future studies necessary to fulfil their statutory duties.

(vi) Development Plan

8.92 Some objections stated that the scheme is in conflict with the development plan.

Reporters' Conclusions

8.93 In paragraph 2.31 we noted the status of the Whitesands Masterplan as adopted supplementary guidance, the scheme therefore has support within the current local development plan. We have also addressed policy matters in relation to visual and heritage impacts in chapter 4 and town centre impacts in chapter 6 where we did not find any conflict with Local Development Plan policies.

(vii) Common Good Land

8.94 The original objection from the Save Our Sands group and some objectors raised concerns that part of the scheme involves use of common good land. The council has failed to correctly notify the public of its intent to include that land or to budget for the acquisition of this land.

Reporters' Conclusions

8.95 The Dumfries Common Good sub Committee has noted that the scheme would impact on common good land and in October 2014 it gave approval for the land be used for the Whitesands Project.

Overall Conclusions

8.96 We consider that the changes proposed may not be treated as modifications to the proposed scheme. However if Ministers are persuaded by the arguments put forward by the objectors then it is open to them to agree with the objectors and to choose not to confirm the scheme. Having considered the evidence in our earlier chapters there are no modifications that we recommend Ministers make to the scheme.

8.97 The council's conditions closely relate to the mitigation set out in the ES. We consider that, subject to some minor modifications, the council's suggested planning conditions meet the relevant tests set out in the Circular. As we have explained above we consider that many of the amendments and additions sought by Save Our Sands do not meet those tests.

8.98 For the reasons set out above, we consider that the conditions set out in Appendix 3 would be appropriate in this case. We conclude that if the Ministers are minded to confirm the flood protection scheme then the deemed permission should be subject to these conditions.

8.99 In terms of the other matters raised we consider that if Ministers are sufficiently dissatisfied with the evidence on town centre impacts they may choose to reject the scheme. We do not consider that the other matters constitute reasonable grounds not to confirm the scheme.

Chapter 9 Overall Conclusions & Recommendations

Statutory Framework

9.1 In chapter 2 we have set out the statutory framework that is relevant to the consideration of the scheme. The 2009 Act imposes a general duty on the Ministers, SEPA and the council to exercise their flood risk related functions with a view to reducing overall flood risk. It also requires them to have regard to social, environmental and economic impact in the exercise of that duty. The associated 2010 Regulations require that the Ministers take the environmental information contained within the ES into account and to state in their decision that they have done so.

9.2 Part 3 of the 2009 Act creates a hierarchy of flood risk management plans. The Flood Risk Management Strategy – Solway was prepared by SEPA and approved by the Scottish Ministers. This strategy identifies a flood protection scheme at Whitesands to be 18 out of 42 in terms of priority for Scotland. The Solway Local Flood Risk Management Plan June 2016, prepared by the council also identifies a flood protection scheme for Whitesands. A procedural matter to note is that if the scheme is rejected the local Flood Risk Management Plan would have to be updated to reflect that fact that the scheme would not be progressed. SEPA has indicated that an alternative scheme would only be promoted in the next Flood Risk Management Strategy for this area from 2022 onwards.

9.3 Part 4 of the 2009 Act provides councils with the power to prepare flood protection schemes. Section 65 of the 2009 Act states that upon confirming a flood protection scheme, planning permission is deemed to be granted. The Whitesands Masterplan was adopted as supplementary guidance in February 2015 and forms part of the development plan for the area. The masterplan aims to integrate the flood protection of Whitesands with various other environmental improvements in order to regenerate the area.

Preliminary Matters

9.4 In chapter 1 we addressed procedural matters relating to notification arrangements and the adequacy of the environmental information.

9.5 Some parties consider that the council has not complied with the notification requirements of the 2009 Act and this has resulted in property owners being denied the opportunity to object to the scheme. The disagreement centres on notification of parties whose interest in land may be affected by any alteration in the flow of water and whether the proposed scheme would see an increase in flood levels in the Nunholm area. The council denies that the scheme would result in an increase in flood levels at Nunholm.

9.6 We have concluded in chapter 3 that the modelling demonstrates that the proposed scheme would not increase flooding up or down stream. Ultimately, however, only the courts can provide the definitive interpretation of legislation and we concluded that it would be prudent for Ministers to satisfy themselves that the procedural requirements have been followed.

9.7 It has been alleged by some parties that the ES is factually incorrect, inaccurate, based on inadequate surveys and that it was not subject to adequate public consultation.

9.8 We agree that the relevant regulations for the content of the ES scheme are set out in Schedule 2 of the 2010 Regulations, as interpreted as set out at paragraph 1.26. The environmental information has been considered by SEPA, SNH, HES and Scottish Water, all of whom are familiar with environmental impact assessments, and they did not make any comments regarding the competency of the submissions. The comments made are actually a disagreement about the nature and extent of the predicted environmental effects rather than a deficiency in the scope of the submitted environmental information. We are satisfied that the ES is in accordance with the 2009 Act and 2010 Regulations, as so interpreted.

Technical Matters

9.9 There is no requirement to adopt a specific level of protection in the design of flood protection schemes. The scheme has been designed to provide protection at Whitesands for up to a 1 in 75 years flood event. We accept that it would not provide protection from all flooding but it is not intended to do so. The modelling indicates that the scheme would meet the objective of reducing flooding at Whitesands. It would therefore help the council fulfil its statutory duties under the 2009 Act.

9.10 We accept that no modelling can be 100% accurate however, the hydraulic modelling has been developed over many years by recognised specialists and has been accepted by SEPA as the best available evidence. We are satisfied that it provides the only suitable basis for considering the scheme. We are content that the modelling has demonstrated that direct defences are needed at Whitesands in order to provide protection from flooding.

9.11 There is no requirement in the 2009 Act, the 2010 Regulations or Scottish Government guidance that a specific allowance be included for climate change in the design of flood protection schemes, although it is expected that the effect of climate change is taken into account. The scheme allows for future adaptations if it is determined that it is necessary and appropriate to increase the height of the defences. This approach is in accordance with Scottish Government guidance.

9.12 In dealing with natural and dynamic processes it is not possible to guarantee that the outcomes would be absolutely as predicted. However, on the basis of the evidence before us we find that the modelling demonstrates that the proposed scheme would not increase flooding up or down stream. We are content that any predicted upstream impacts are within the margins of error of any model and in any event, are not predicted to occur with the removal of the berm. We are satisfied that the implementation of the mitigation could be adequately secured by our proposed conditions.

9.13 We consider it has been demonstrated that, technically, the scheme is feasible and is not a disproportionate response to address flooding at Whitesands. Other options have been considered in the development of the scheme but were discounted for reasons including lack of reduction in flood risk, technical difficulties and costs. We are satisfied that no alternative option has been demonstrated to be so technically or financially superior that it casts doubt on the suitability of the proposed flood defence scheme.

9.14 We accept that maintenance would be very important to ensure the appearance, integrity and longevity of the scheme. The ongoing input required would not be insubstantial and would require a long term commitment from the council. The 2009 Act places a duty on the council to inspect and maintain flood structures. Difficulties in some

local projects or individual instances of lack of maintenance does not mean that it cannot fulfil its duty to maintain the flood protection scheme. We have not been presented with technical evidence that leads us to conclude that the scheme may not withstand the force of the flood water or that the design is vulnerable to failure.

9.15 We have no substantive reason to doubt the council's revised cost benefit analysis which supports the conclusion that the scheme meets the required cost benefit ratio. We consider that it is reasonable to conclude that the scheme has not been over-engineered and that a more modest scheme, offering a lower level of protection, is unlikely to represent best use of public money. However as there has been no independent verification of the council's figures Ministers may wish to commission their own independent assessment if proving value for money is a determining consideration before confirming the scheme.

9.16 The evidence indicates that the scheme would also reduce flooding that results from the water and sewerage drainage system and has taken account of the underground watercourses in the area. Scottish Water has no objections and has advised that it has been involved in both the development and the design of the scheme. We find nothing that suggests that this aspect of the scheme would not be delivered.

Visual and Heritage Matters

9.17 In chapter 4 we considered heritage, townscape and visual impacts. The assessments undertaken as part of the ES have adopted a widely recognised methodology. In determining the overall magnitude of change the assessors "traded off" what they considered were beneficial changes against changes they considered to be adverse. It has to be recognised that this relies on a series of professional judgements, many of which are subjective. The overall conclusions from these assessments was that there would be no significant effects on heritage assets, the townscape or views.

9.18 The dispute between the council and objectors can be explained by the logic of the council's assessment methodology and different aesthetic judgements. We accept that, as the assessment methodology entails subjective judgements, it is legitimate for the objectors to disagree with the weightings applied and we can understand why they disagree with the conclusions reached.

9.19 There is no dispute that the proposed scheme would have direct impacts on Devorgilla Bridge. The scheme would interrupt views of the bridge in association with the nearby 'Caul' and the town but we find that this would not be to an extent that would significantly affect the ability to understand and appreciate the cultural significance of this historic asset or its setting. In our judgement the change to the setting would not be significant (for EIA purposes) or unacceptable. The best views of the bridge are obtained from the riverside walkway, those views would still be available if the scheme was implemented.

9.20 The policies of HES and the Scottish Government permit sensitive change to heritage assets and their setting. HES has been involved in the development of the scheme and has not indicated that it has any fundamental concerns over the impact of the scheme or the findings of the heritage impact assessment. Although there is disagreement over the potential for HES to grant the required Scheduled Monument Consent this is a separate process and independent of any decision to confirm the scheme or not. There is no reason to assume that HES has any fundamental concerns that would be unable to be

resolved. If it ultimately considers the scheme would have an unacceptable impact upon Devorgilla Bridge either the scheme would not proceed or would have to be modified.

9.21 In terms of impacts on the Dumfries Conservation Area there is no dispute that the scheme would erode the historical connection between the town and the river. The riverside and key views to and from that location are identified as a key parts of the character of the conservation area. The impacts would, however, be localised to the vicinity of Whitesands and would not impact on the wider conservation area. We do not find that the changes to the character of the conservation area overall are unacceptable.

9.22 Overall, we conclude that the scheme would have some adverse impacts upon heritage assets. However, assuming that there is a need for a flood defence scheme, we do not consider that such impacts are unacceptable. We therefore find no conflict with the proposed scheme and the various policies that aim to ensure changes to heritage assets are carefully managed.

9.23 In terms of townscape the key concern of most objectors relates to changes to Whitesands. The scheme would intrude upon the important panoramic views unless experienced from the raised walkway or riverside esplanade. It would interrupt the connection between the key townscape components eroding the link between the town and the river. It is clear that Whitesands would profoundly change as a place, this is an inevitable consequence of the proposed scheme. Whether the changes would be an improvement is a subjective judgement that is likely to vary from individual to individual. If it is accepted that there is a need for the scheme then we believe that any perceived adverse townscape impacts are outweighed by the benefits of improved flood defences.

9.24 Many of the objectors place a high amount of importance on views of the river and Devorgilla Bridge, particularly from Whitesands. We agree that they are part of the attraction of this part of the town to both locals and visitors and that it is fair to describe views of the river, Devorgilla Bridge and the Caul as iconic. We observed that views of the river from Whitesands are location and time sensitive and are not as limited as argued by the council. However, we do not consider that it is fair to say that all views would be lost. Not all of the views would be materially altered, the best views of the river and bridge from the esplanade would remain and the raised walkway would provide enhanced views. However, it is clear to us that as a result of the landscaped bund across Whitesands some views on the town centre side of the barrier would be lost or partially interrupted.

9.25 We agree that the design of the scheme has sought to address those adverse impacts and we believe that the council has done what it reasonably can in reducing the impact of the bund given the structure's essential function. However, whether the visual changes are beneficial is an essentially aesthetic judgement that would vary from individual to individual. We recognise that many of the objectors do not consider the public realm works an improvement. We consider that it is unhelpful to describe (as many of the council's assessors have done) many of the visual effects as minor as this fails to capture how we believe many people will perceive the scheme. However, if a need for a flood defence scheme is accepted then we believe that any adverse visual impacts are outweighed by the benefits of the proposed flood defences.

9.26 There is no doubt that many of the objectors find the heritage, townscape and visual impacts to be unacceptable. The scheme involves an inevitable trade-off between any such impacts and the benefits of enhanced protection from flooding. Overall, assuming that the

flood defence scheme is necessary, we do not consider that any of the adverse townscape and visual impacts of the scheme would be unacceptable to the point where it should not be confirmed.

Impacts on Ecology

9.27 In chapter 5 we found that the scheme could potentially result in disturbance of protected species. SNH is satisfied that the necessary surveys have been undertaken and has raised no concerns regarding their methodology or adequacy. We are satisfied that there is no cause to doubt the validity of the surveys utilised in the assessment of ecological impacts on protected species. Subject to pre-construction surveys, and the implementation of any required mitigation, we concluded that potential effects on protected species would be acceptable. We accepted that there would be some ecological impacts due to the need to undertake some tree felling but that replanting would offer acceptable mitigation.

9.28 The site of the flood protection scheme is approximately 5 kilometres from the Solway Firth SAC and we acknowledge that its qualifying interests are functionally linked to the River Nith. The works to remove the sediment berm at Devorgilla Bridge relate to a very small part of the river that could theoretically affect the qualifying interests of the SAC. SNH was consulted at various stages in the development of the scheme, it did not at any stage indicate that the works would have likely significant effects on the qualifying interests of the SAC or that an Appropriate Assessment would be required. We concluded that there would be no reasonable likelihood of significant effects on the qualifying interests of the Solway Firth SAC and that the scheme could proceed with no reasonable likelihood of there being an adverse effect on its integrity. That being the case, we are content that an Appropriate Assessment under the Habitat Regulations is not required. Any requirement for future sediment removal would, as advised by SEPA, require a CAR license and would be controlled by that regime.

9.29 We noted that the works may require a European Protected Species licence but we concluded that there is no reason to presume at this point that if such a licence was needed it would not be forthcoming. SNH who are responsible for these licences have not suggested any difficulties. We consider that the prospect of such a licence being granted is not a matter for any further consideration of the Ministers in relation to the flood protection scheme.

9.30 We therefore consider that the potential presence of protected species and nearby SAC should not preclude Ministers confirming the flood protection scheme.

Impacts on Town Centre, Tourism and Parking

9.31 In chapter 6 we considered the objections, including those from local businesses, in relation to the impacts of the scheme on the town centre, tourism and parking.

9.32 We recognise that traders at Whitesands consider that they can acceptably deal with the flooding that they have experienced to date and that it does not cause significant impacts on their businesses. We recognise that Whitesands is a busy part of the town centre and agree that the parking is convenient for the businesses at this location and for those in the town centre.

9.33 In the short term we believe that there would be some adverse economic impacts as disruption during the construction period would be inevitable. In particular, we considered that the lack of access to the riverside walkways would impact on footfall in this area and consequently have an impact upon Whitesands and the town centre.

9.34 In the longer term, as also noted in chapter 3, we agree that the scheme would bring economic benefits to businesses and other property owners through direct flood damages avoided. This would be significant over the lifetime of the scheme, particularly if a large scale flood event is avoided.

9.35 There were claims that the scheme would have wider economic benefits through regeneration and also claims that the scheme would have long term adverse economic effects on the town centre. Over the long term it is impossible to accurately predict what may or may not happen as there are too many unknowns. It would therefore be prudent to adopt a conservative approach in assuming long term economic benefits.

9.36 The 2009 Act makes provisions for compensation payments to help offset economic impacts and the council has stated its commitment to work with the local businesses and to establish a scheme to allow for advance payments. However, we can understand that even short term adverse impacts could be fatal to some businesses and that uncertainty may adversely affect businesses and hinder investment.

9.37 The scheme would result in the direct removal of 146 spaces from the riverside car parks at Whitesands. Many of the objectors find the changes to the parking unacceptable and some dispute the council's contention that there would be no net loss of car parking. We observed that the parking at Whitesands is well used, this reflects the findings of the council's car parking surveys. We also found that the replacement parking would be less conveniently located and it would not be as appealing to all sectors of the population as the existing parking. We concluded that, overall, there would be a net loss in the quality of parking as a result of the scheme

9.38 Over the lifetime of the scheme there are likely to be significant changes in patterns of land use and behaviour, particularly relating to travel, work, shopping and leisure, that would affect the town centre and Whitesands whether the scheme is implemented or not. It is therefore not possible to predict with any certainty what the impact of the scheme would be. Again, it would be prudent to assume a neutral impact overall to avoid either undue optimism or pessimism.

9.39 It is acknowledged that the Whitesands area and the river contribute considerably to the town's overall appeal to visitors. We concluded that there would be short term impacts on tourism during the construction period. In the longer term the council may be correct and the raised walkway could increase the number of visitors. Although the river and parking would be less obvious we recognise that the scheme would retain some riverside parking and could still constitute an attraction to tourists and other visitors.

9.40 As noted within our consideration of technical matters the need for flood protection at Whitesands has clearly been justified. Alternative options could avoid the significant loss of parking and perhaps have lesser economic impacts, but, as indicated in chapter 3, none of them cast doubt on the suitability of the proposed flood defence scheme. While the potential economic impacts of the scheme are uncertain they must be balanced against the

likelihood that flooding will increase in frequency and severity. Overall we find that more weight should be given to the protection offered by the scheme.

Community Engagement

9.41 In chapter 1 we recommended that Ministers satisfy themselves that the council has followed the notification arrangements set out in the 2009 Act and 2010 regulations. They council claim that they have. In chapter 7 we noted the clear and genuine disagreement regarding the adequacy of the council's community engagement.

9.42 Over the time taken to develop the scheme there have been a number of consultation processes using conventional techniques. No doubt the council will want to review which techniques were the most successful. In chapter 7 we considered the consultation undertaken by the council in relation to Scottish Government guidance on engaging with the public as set out in SPP, 'Delivering Sustainable Flood Risk Management' guidance and Planning Advice Note 3/2010. We are content that the community engagement accords with that guidance and advice from the Scottish Government and we cannot agree that the views of objectors have been ignored. The council is aware of the opinions expressed and have taken them into account as the scheme has evolved. There is clearly a disagreement over the fundamental flood protection strategy. This is a matter of judgement and not a case of right or wrong. Disagreeing over the basic flood strategy is not the same as ignoring public opinion. Ultimately the 2009 Act gives the responsibility for the decision to the council, subject to Ministers confirmation. Obviously the views of objectors need to be taken into account but that does not mean that the opinion of objectors must automatically prevail. The reality is that the decision involves complex trade-offs and a range of opinions within the public are inevitable.

9.43 In our view, for a technically complex project involving difficult trade-offs, it is unlikely that a consensus would have been reached on any scheme irrespective of the community engagement undertaken. However, in reaching an overall balanced decision, if Ministers are persuaded by the arguments put forward by the objectors then it would be open to them to not confirm the order.

Modifications and Conditions

9.44 In chapter 8 we considered a number of modifications proposed by the objectors and the position in relation to the council's proposed planning conditions.

9.45 Save Our Sands has stressed that although it has given consideration to these matters its preferred position is that the current scheme should not be confirmed and that a fresh scheme should be devised. However, if the scheme is confirmed significant modifications are sought including the replacement of the proposed raised walkway with a self-rising barrier and that alterations to the parking and bus stance be excluded.

9.46 Morton Fraser take the view that the defects in the scheme cannot be overcome by the imposition of conditions and instead it should be modified to delete the removal of the sediment berm and include local flood defences at Nunholm.

9.47 It is clear to us that the modifications proposed would be fundamentally different in terms of the nature of the scheme, its geographical location, spatial extent and potential

impacts. In our opinion it would, therefore, not be competent for those changes to be treated as modifications. However, if Ministers are persuaded by the aims of the modifications put forward by the objectors then they should not confirm the scheme.

9.48 The council's conditions closely relate to the mitigation set out in the ES. We have concluded that, subject to some minor modifications, those planning conditions meet the relevant tests set out in the Circular 4/1998. In addition to the conditions proposed by the council we have, as noted in chapter 3, recommended a condition requiring that the council implement the proposed mitigation at Devorgilla Bridge.

9.49 We find that the amendments and the additional conditions proposed by Save Our Sands do not meet those tests. We could not agree to the need for conditions relating to the need for a PMO and a community liaison group. We consider that both are highly desirable but, as the council is the promoter of the scheme, these can be achieved without the need for conditions. We also find that it is not necessary or reasonable for the ECoW to be recruited from out with the council and be accountable to the Scottish Government. In addition, we do not agree that it is inappropriate that the council discharges the planning conditions. We find no justification to depart from what is normal practice when a council is a developer. In addition, there is no legal basis for the council's enforcement powers to be transferred to another body. We find that the request that the deemed permission be granted in principle would be unreasonable. While further details of scheme would be prepared in the final contractual drawings we consider that this should not prevent deemed permission from being granted in full. The request to incorporate additional requirements relating to maintenance are also considered to be unreasonable and unnecessary. We have addressed community engagement in chapter 7.

9.50 In Appendix 3 we set out our recommended planning conditions in the event that Ministers decide to confirm the scheme.

Overall Conclusions

9.51 Section 1 (1) of the 2009 Act places a duty on the council to exercise their flood risk functions with a view to reducing overall flood risk. The requirement for a flood defence scheme at Whitesands has been identified in the Solway Local Flood Risk Management plan. Any flood defence scheme will involve balancing impacts and benefits. This is a difficult task because it involves balancing known and some unknown impacts against potentially very serious flood damage of an unknown frequency.

9.52 The hydraulic model has been developed over many years by recognised experts, calibrated against actual flooding events and verified by SEPA. We find that there is no better alternative than the current model to evaluate the scheme. Based on the model, for the reasons given in chapter 3, we found no reason to conclude that the scheme would result in any increase in up or downstream flooding. Alternative options have also been assessed. For the reasons set out in chapter 3 we found none that would be obviously superior to the proposed scheme.

9.53 The council's cost benefit analysis shows that the proposed scheme is cost effective (i.e. the costs of construction are exceeded by the costs of flood damage avoided). However, this analysis has not been independently verified and the council's appointed consultant did not review the expected cost of the scheme. We recommend that the

Scottish Government reviews the council's cost benefit analysis to satisfy themselves the scheme represents a good use of public money.

9.54 There would be unavoidable impacts caused by the proposed scheme. To an extent there are inevitable trade-offs between heritage and visual impacts and the extent of flood protection. There would be inevitable disturbance during construction and there would be a loss of "quality" car parking spaces. The longer term economic benefits (aside from the reduction in flooding) or costs of the scheme are impossible to predict and therefore best presumed to be neutral over the long term. The council (although not unanimously) took the view that the benefits of flood protection outweighed the impacts. Having assessed the evidence in chapters 4, 5 and 6 we share that opinion.

9.55 There is clearly a significant body of opinion that is against the proposed scheme and would reach a different judgement than that reached by the council. What many objectors described as a lack of engagements seemed to us to be better described as a disagreement over the basic flood protection strategy. Bearing in mind the difficult nature of such a decision we do not believe attempting to find a broad consensus of opinion is realistic.

9.56 If Ministers are persuaded by the arguments put forward by many of the objectors, that there are better alternatives and that impacts are unacceptable the scheme should not be confirmed. We consider that the modifications to the scheme suggested by Morton Fraser on behalf of Nunholm residents and Save Our Sands would not be competent. Again, if Ministers were persuaded that the objectives behind the modifications are desirable then the scheme should not be confirmed. Not confirming the scheme would allow the council to review the scheme and investigate in more detail alternatives, particularly the high self-rising wall. However, we would be concerned that the essential dilemmas would remain and the prospects of an alternative, cost effective scheme being found within technical, budgetary and other constraints, while achieving what is considered to be an appropriate level of flood protection would be uncertain.

Recommendation

9.57 We recommend that Scottish Ministers confirm The Whitesands Project (Flood Protection Scheme and Public Realm Improvements) 2017 subject to:

- Seeking legal advice to satisfy Ministers that the council's notification arrangements complied with the Flood Risk Management Act and associated regulations
- Being satisfied that they have addressed the matter of Appropriate Assessment under the 'Habitats Regulations' and, if so, in the formal decision, adopting our findings that the proposed scheme would not have a likely significant effect on the Solway Firth SAC either alone or in combination with other projects
- Reviewing the council's cost benefit analysis to satisfy Ministers that the scheme represents value for the use of public money
- Being satisfied on the basis of our findings or otherwise, that it would not be competent for the proposed changes to be treated as modifications by reason of them fundamentally altering the scheme

- Including the planning conditions set out in Appendix 3 in the direction confirming the scheme

Dan Jackman

Assistant Chief Reporter

Lorna McCallum

Reporter

Appendix 1: List of Objectors

Provided as separate document

Appendix 2: Appearances and Evidence

Those individuals who participated in the inquiry sessions are listed below, where they have provided inquiry statements, precognitions and closing submissions links are given within the body of this report.

Background and Context

Save Our Sands:

John Dowson, Brian Sherman, Peter Bacci, William Potts, John Greenwood.

Other Parties giving Evidence:

Oliver Mundell MSP

Technical Matters

Council:

Mr Tim Jolley: evidence on hydrology and hydraulics;

Mr Paul Swift: option choice and level of protection;

Mr Rob Sharpe: drainage infrastructure;

Dr John Chatterton: cost benefit analysis;

Mr Stuart Callander: cost of the scheme;

Mr James McLeod: option choice, maintenance, health and safety and drainage infrastructure.

Save Our Sands:

John Dowson, Mr Marchant, Oliver Femont, Alistair Moir

Visual and Heritage Matters:

Council:

Mr Graeme Pert: the scheme design and conservation architecture;

Ms Catharine Kidd: the impacts of the scheme on heritage assets including the Devorgilla Bridge and other listed structures and the conservation area

Ms Susan Irwine: the impacts of the scheme on townscape.

Save Our Sands:

John Dowson, Felix Waterhouse

Town Centre, Tourism and Parking Matters:

Council:

Mr Jason Syers: the town centre and tourism impacts of the scheme;

Mr Daniel McCluskey: the assessment of the impacts on the town centre

Mr Anthony Topping: the impacts on parking.

Save Our Sands:

John Dowson, David Coulter

Community Engagement:

Council:

Mr Jason Syers

Mr Michael Smith

Save Our Sands:

John Dowson, David Coulter

Other Parties giving Evidence:

Morag MacDonald: Community Engagement

John White: Technical, Visual & Heritage and Town Centre, Tourism & Parking

Appendix 3: Recommended Conditions

Phasing

1. There shall be no Commencement of Development on any phase of the scheme until a schedule setting out the phases of construction of the scheme have been submitted to and approved in writing by the Council. The phasing schedule shall include that alternative car parking provision is in place prior to the commencement of works within any phase which will result in the permanent loss of any car parking spaces. The approved schedule shall be implemented as approved.

Reason: To ensure that the works are programmed to minimise disruption to access, parking and servicing during construction of the scheme and to secure the provision of replacement parking.

Design approval

2. There shall be no Commencement of Development on any phase of the scheme until the following details in relation to that phase have been submitted to and approved in writing by the council.

- (a) The layout;
- (b) Scale;
- (c) Proposed finished ground levels;
- (d) External appearance
- (e) Hard surfacing materials;
- (f) Vehicular and pedestrian access, parking and circulation areas;
- (g) Minor structures, such as furniture, refuse or other storage units, signs and lighting;
- (h) Proposed and existing functional services above and below, ground, including drainage, power and communications cables and pipelines, manholes and supports; and
- (i) Implementation timetables for all landscaping works;

The details submitted must be in accordance with the limits of deviation set out in the Flood Protection Order. The works shall thereafter be carried out in accordance with the approved details and implementation timetables.

Reason: To ensure that the environmental impacts of these aspects of the scheme conform to the impacts assessed in the environmental statement and in the interests of the visual amenity of the area and in the interests of road safety.

Landscaping

3. There shall be no Commencement of Development on any phase of the scheme until for that phase a written Landscape Management Plan (including tree retention) and associated work programme has been submitted to and approved in writing by the council in consultation with Scottish Natural Heritage (SNH) and Historic Environment Scotland (HES). All landscape works shall be carried out in accordance with the approved landscape management plans and work programme and in accordance with the relevant recommendations of appropriate British Standards. Any tree or shrub planted as part of an approved landscape management plan that, within a period of five years after planting, is removed by the undertaker, dies or becomes, in the opinion of the relevant planning

authority, seriously damaged or diseased must be replaced in the first available planting season with a specimen of the same species and size as that originally planted.

Reason: In the interests of visual amenity and effective landscape management and to ensure that adequate measures are put in place to protect the landscaping and planting in the longer term.

European Protected Species and ecological management

4. There shall be no Commencement of Development on any phase of the scheme until for that phase:

(a) Final pre-construction survey work has been carried out to establish whether any European Protected Species are present on any of the areas affected, or likely to be affected, by that phase of the works or in any of the trees to be lopped or felled as part of that phase of the works;

(b) A written Ecological Management Plan, reflecting the survey results and ecological mitigation and enhancement measures included in the ES including an implementation schedule, has been submitted to and approved in writing by the council in consultation with SNH. The ecological management plan shall thereafter be carried out in accordance with the approved plan and implementation schedule; and

(c) Where a European Protected Species is shown to be present, works must not begin until a Species Protection Plan, including mitigation measures, has been submitted to and approved in writing by the council in consultation with SNH or a European Protected Species licence has been granted by SNH. Any scheme of protection and mitigation measures shall include a sensitive lighting regime to minimise the risk of disturbance to foraging bats. Thereafter works must be carried out in accordance with the approved scheme of mitigation. In this condition, "European Protected Species" has the same meaning as in regulation 38 of the Conservation (Natural Habitats & c.) Regulations 1994.

Reason: to ensure that; species protected by law are not harmed as a result of the Construction of the scheme.

Ecological Clerk of Works

5. There shall be no Commencement of Development on any phase of the scheme unless the council has appointed an independent Ecological Clerk of Works (ECoW) in consultation with SNH and SEPA. The terms of appointment shall:

(a) Impose a duty to monitor compliance with the ecological and hydrological commitments provided in the ES and the ecological requirements of conditions 4, 6 and 9;

(b) Require the ECoW to report any incidences of non-compliance with the ECoW works at the earliest practical opportunity;

(c) Require the ECoW to submit a monthly report to the Council summarising works undertaken on site;

(d) Give the ECoW the power to stop any activities being undertaken within the Flood Protection Order land if a breach or potential breach of environmental legislation occurs to allow for a briefing of the concern to the nominated construction project manager; and

(e) Require the ECoW to report to the Council any incidences of non-compliance with the ECoW Works at the earliest practical opportunity.

The EcoW shall be appointed from Commencement of Development, throughout any period of construction activity and during any period of post construction restoration works approved where the works carried out during that period are likely to result in significant adverse effects on protected species or habitats.

Reason: To enable the development to be suitably monitored to ensure compliance with the deemed permission issued and to secure delivery of the environmental mitigation and management measures associated with the development.

Construction and Environment Management Plan

6. There shall be no Commencement of Development on any phase of the scheme until a Construction and Environment Management Plan and a Construction Method Statement have been submitted to and approved in writing by the council in consultation with the Scottish Environment Protection Agency (SEPA), HES and SNH. These shall include:

(a) Details of working hours;

(b) Measures to reduce the impact of air and soil pollution and sediment run-off; and

(c) An implementation schedule.

The Construction and Environment Management Plan and Construction Method Statement shall thereafter be implemented in accordance with the approved details and implementation schedules unless otherwise approved in advance in writing by the council in consultation with SNH and SEPA.

Reason: To protect the environment from the construction and operation of the scheme and secure final detailed information on the delivery of on-site mitigation works.

Construction Traffic Management Plan

7. There shall be no Commencement of Development on any phase of the scheme until for that phase written details of a Construction Traffic Management Plan has been submitted to and approved in writing by the council in consultation with SEPA. The construction traffic management plan shall contain details of:

(a) Public road closures and restrictions;

(b) Proposed vehicle routeing plans;

(c) Any abnormal indivisible loads that may be delivered by road, or confirmation that no abnormal indivisible loads will be required for construction of the authorised development;

- (d) Condition surveys;
- (e) Any highway works proposed;
- (f) Wheel washing measures to ensure water and debris are prevented from discharging from the site onto the public road; and
- (g) Construction personnel travel.
- (h) An implementation schedule.

The Construction Traffic Management Plan shall thereafter be implemented in accordance with the approved details and implementation schedule unless otherwise approved in advance in writing by the council.

Reason: To ensure that the works are programmed to minimise disruption to access, parking and servicing during construction of the scheme, in the interests of road safety and to ensure that any abnormal loads are managed in a safe manner.

Archaeology

8. There shall be no Commencement of Development on any phase of the scheme until a scheme of archaeological investigation, including an implementation timetable, has been submitted to and approved in writing by the council in consultation with HES. Thereafter works must be carried out in accordance with the approved scheme of archaeological investigation and implementation timetable. Access shall be afforded at all reasonable times to any archaeologist nominated by the council to allow work to be observed in progress and the recording of any items of archaeological interest.

Reason: To ensure the protection or recording of archaeological features impacted by the scheme.

Implementation of sediment removal under Devorgilla Bridge

9. There shall be no Commencement of Development on any phase of the scheme until written details and an implementation timetable for the sediment removal at Devorgilla Bridge have been submitted to and approved in writing by the council in consultation with SEPA, HES and SNH. The removal of sediment at Devorgilla Bridge shall thereafter be completed in accordance with the approved details and implementation timetable.

Reason: To secure the delivery of the mitigation measures as set out within the Hydraulic Modelling Report (Mouchel 2017) and to minimise environmental impacts arising from the sediment removal.

Appendix 4: Comments Received but not Considered

In addition to the objections listed in Appendix 1 correspondence has been received from parties opposed to the scheme. The Reporters considered that they did not have any remit to extend the scope of the inquiry to include parties other than those who made objections notified to them by the client division. However this correspondence is provided for the information of the Ministers. The additional correspondence received is as listed below.

1. **Mr & Mrs Jackson**

[Email](#) dated 22 August 2018 and DPEA response dated 3 September 2018

2. **J & A Simpson**

[Email](#) to Nicola Sturgeon MSP

3. **Michael G Moore**

[Email](#) to Roseanna Cunningham MSP

4. Petition of local residents dated 9 October 2018 ([Part 1](#), [part 2](#) and [part 3](#)) organised by **Oliver Mundell MSP**

Appendix 5: Inventory of Documents

The submitted evidence by the various parties includes those on the following lists, although this is not exhaustive. Full details of all documents are available within the [case file](#) on the DPEA website.

Council

Inventory of documents provided as [Document List](#)

Save Our Sands

Inventory of documents provided as [Document List](#)

[Precognition](#) of David Coulter containing Document List

Morag MacDonald

[Inquiry Statement](#) containing Document List

Oliver Mundell MSP

[Document List](#)

Darren Miller

[Document List](#)

Historic Scotland

[Hearing Statement](#) containing Document List

Scottish Water

[Hearing Statement](#) containing Document List

SEPA

[Hearing Statement](#) containing Document List

SNH

[Hearing Statement](#) containing Document List