

Health Impact Assessment (HIA)

Screening

(Version 0.1X)

Screening completed by	Laura Cotton – Lead Specialist Advisor: Environmental Assessment
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Project Name	Stephenson Street Flood Risk Management Scheme		
Location	Newport	Grid reference	ST3191986152
Senior User	Chris Powell	Senior User Post Title	Senior Engineer Asset Performance
Project Manager	Eva Neville	Project Manager Post Title	Project Manager
Community Risk Register Area	Liswerry, Usk, Newport	Strategic Context	Usk

Link to the project brief/mandate to detail background, scope, description, and objectives

The current flood defences include an existing 1,350m long flood embankment located on the left (eastern) bank of the River Usk from Stephenson Street south past Coronation Park in Newport, between National Grid Reference (NGR): ST3191986152 and NGR ST 32873 85428. The defences reduce tidal flood risk to much of the Liswerry area of Newport including significant industry, leisure and residential properties. Assuming a breach was to occur today some 192 residential and 620 non-residential properties in Spytty have greater than a 1 in 200 risk of tidal flooding in any given year. Sea level rise due to climate change increases the predicted risk significantly to 1,117 residential and 1,016 non-residential properties. The predicted speed and depth of inundation is hazardous, extending some 2.5km from the embankment.

The embankment is in poor condition due to subsidence and structural failures; although, this asset is not recorded on the NRW register as its ownership is currently under Newport City Council. The embankment crest level varies along its length, with known low spots originating from the original design, subsequent subsidence and landowner activity. NRW estimate the standard of protection provided is as low as a 1 in 30-year tidal event (3.33% chance of occurrence) at certain low spots. Near misses have occurred during recent high tides, including in January and March 2014, which corroborate NRW's estimate of the lowest standard of protection.

The Stephenson Street flood risk management scheme is being put forward for planning permission in Spring 2021 by NRW. In summary the proposed flood defences comprise:

Stephenson Street Embankment:

- Raising and reprofiling of the existing bund through Coronation Park, circa 240m in length.
- A sheet pile wall from Coronation Park down to the Hanson's conveyor belt site, circa 590m in length.
- A new reinforced concrete flood wall circa 640m in length through the Felnex Industrial Estate, connecting in to a railway embankment to the east.
- A new highway is proposed to connect the current dead-end of Corporation Road to East Bank Road to maintain access to businesses in Corporation Road and provide a means of escape when the flood gate is closed. An embankment is proposed as part of the upgrade to carry the proposed highway over the defence level.
- **Corporation Road:** A flood gate across Corporation Road where it passes beneath the railway embankment.
- **North of the Transporter Bridge:** Infilling of three low spots to the north of Stephenson Street, including on the road near the Grade I Listed Newport Transporter Bridge.
- **Railway Wall:** A circa 50m long reinforced concrete wall.
- **North of the Nash Wastewater Treatment Works:** A circa 30m long reinforced concrete wall.

As well as the works described above, the project has put forward landscape, recreation and biodiversity enhancements focused around the Transporter Bridge, Coronation Park and the Wales Coastal Path.

Stakeholders who have taken part in this screening:

Consultation on the project has taken place in a number of forms.

A non-statutory environmental assessment process is being followed and population and human health is one of the topics that is considered within this. The focus of this consultation has mainly been specialist stakeholders such as the following that relate to health: Newport City Council (numerous departments), Wales Coast Path Officers, Green and Safe Officer, Fire and Rescue, Police and Sports Wales.

Interviews and site visits were also undertaken with people with specialist knowledge of the area and the potential health impacts / benefits of the scheme.

Consultation with business has been extensive and target to those affected by the scheme.

Consultation with the Public had to take place online due to the Covid-19 outbreak. This was undertaken via the [Citizen Space](#) portal in September / October 2020. Letters were mailed to approximately 2,000 residents and businesses in an area corresponding with the flood plain to make them aware of the portal. Forty responses were received to the questions, which included:

- How do you use the park and what do you value most about it?
- Are you a regular user of the Wales Coast Path in this area?
- What do you value most about this footpath?
- Do you support our proposals for landscaping and public space enhancements around Coronation Park and the Wales Coast Path?
- Please provide any feedback you have on these proposals - Feedback on landscaping
- Do you support our proposals for a new flood defence scheme in this area?

The responses to the consultation showed support for the flood defence actions and the proposed enhancements within Coronation Park.

Consultation on this HiA document was then undertaken formally via the pre-application consultation for the scheme in April / March 2021. This is reported fully in the Pre Application Consultation Report (Arup, 2021). It was found that 92.5% of respondents to the survey supported the scheme proposals.

Summary of Community Profile:

'One Newport' has undertaken extensive Community profiling of the City via it's published: [Newport community well-being profiles](#). As such, a community profile has not been repeated for this report, as one already exists for Liswerry in the following:

Community Well-being Profile: Liswerry Final 2017; And

Community Well-being Profile: Liswerry Population Update 2019.

These profiles have reported:

- **Population:** the population of Liswerry is 13,539, which represents 8.94% of the Newport population and is the largest of all the wards in Newport. Liswerry has a higher percentage of people under 16 years old than the wales and Newport average (23.1%). There is an ethnic minority population of 13.9%, above the Newport and Wales average (6.8%). Compared to other wards, it is less densely populated (mainly due to inclusion of Liswerry 6, a more rural outlying area).
- **Health:** The percentage of people who rate their health as bad or very bad in Liswerry is 6.1% compared with 7.4% for the whole of Newport and 7.6% in Wales. However, this percentage varies across the ward. The percentage of people limited by illness is 18%, lower than the average for Newport and Wales. There are no Air Quality Management Areas in Liswerry.
- **Environment / Flood Risk.** In terms of the physical environment, Liswerry ranks among the 10% most deprived as a combination of heavy industry around the ward and resulting contamination and also due to the risk of coastal flooding. The ward has a good provision of open space, but a shortfall in informal and equipped open space.
- **Deprivation:** there is a high percentage of benefit claimants in some part of the ward i.e. Liswerry 5 has 31.1% against a Newport average of 16.4%. Skill levels are relatively low when compared to Newport and Wales figures. 18.9% of children qualify for free school meals. Liswerry 2 is in the top 10% of most deprived areas in Wales. Social housing constitutes 18% of the total housing stock for the ward.
- **Safety:** the rate of criminal offences per 1,000 of population is higher than the Newport and Wales average. Also, the rates of Anti-Social Behaviour has increased since 2013 and is higher than the Newport average. The rate of fire setting is also above the Newport average (78.4 per 10,000 people).

Vulnerable Groups

Local knowledge of the scheme area has identified that possible vulnerable groups in the area are: Pupils of The Bridge Achievement Centre, a Gypsy / Traveller site close to the scheme. Also, the Newport City Dogs Home and Transported Bridge are both within the scheme footprint. Both of these attract volunteers, some of whom could potentially be vulnerable. The Wales Coastal Path is used by a large number of people, but no data is available on which groups or potentially vulnerability. It is currently not very accessible in this section, but that will improve as a result of the scheme and hopefully people who are less mobile will be attracted to the area. Children and potentially other vulnerable people are also using the football fields on Coronation

Park. Evidence of tents have been seen during site visits, indicating that the area is used by homeless people, but not likely to be in large numbers.

The screening draws on HIA terminology, using the following descriptors in the summary tables as follows:

Type of impact:	
Positive	Impacts that are considered to improve health and/or wellbeing status or that provide an opportunity to do so.
Negative	Impacts that are considered to have a detrimental impact on health and/or wellbeing.
Unclear	The outcome of the impact cannot be determined at this stage.
Likelihood of impact:	
Definite	Strong direct evidence from a wide range of sources that an impact has already happened or will happen.
Probable	Good direct evidence (but from limited sources) that an impact is more likely to happen than not.
Possible	Plausible (but with limited evidence to support) that an impact may or may not happen.
Speculative	No direct evidence but issue raised or reported as a potential impact.
Duration:	
Short	Impact seen in 0 – 1 year
Medium	Impact seen in 1 – 5 years
Long-term	Impact seen beyond 5 years

Screening

Impacts Across the Determinants of Health

Resilient communities and healthy lifestyles

Our personal lifestyle choices and connections with family, friends and community, are affected by a range of factors including our interaction with other people, our involvement in community and our sense of control over the environment around us.

Natural resources are a conduit for physical activity, and they support our mental health, making them vital for our health and wellbeing. They provide space for interacting with others and they improve community cohesion. Therefore, when considering developing or making changes to green infrastructure, it makes sense that communities are kept involved, for instance by encouraging engagement, ownership, and usage.

Considerations include: participation in physical activity (e.g. play, walking and cycling, gardening, recreation and sport), healthy food choices; other behaviours affecting health (reducing drinking and smoking, risk-taking activity), mental health and wellbeing, sense of control, social isolation/loneliness, neighbourliness, and participation in community and economic life.

Impact	Likelihood	Duration	Findings
Positive	Probable	Long	<p>The aim of the scheme is to increase the flood protection for the community and the homes and businesses in the affected area. This will have a positive impact on community resilience to future inclement weather.</p> <p>Flooding events have a significant impact on people’s mental health (NRW Health., 2020) and this scheme will reduce flooding to many homes, businesses and local facilities.</p>
Negative	Probable	Short - Med	<p>Due to a (small) number of residential and non-residential properties near the scheme on Stephenson Street, there is a potential negative impact from the construction phase that may affect people’s day to day behaviours e.g. working, learning, volunteering, play, physical activity, transport and participation in community life. This disruption could affect both physical and mental health. Mitigation should be considered with the community for this temporary impact.</p>
Positive	Probable	Long	<p>The scheme is planning to improve the attractiveness of the area which may encourage people to spend more time in the outdoors and may lead to taking more ownership of their area. This is known to have positive impacts on physical and mental health (NRW Health.,</p>

			2020). Also, there will be better access and provision of facilities (benches, interpretation, paths, resting places).
Positive	Probable	Long	As part of the scheme, the access to and accessibility of the Wales Coastal Path will be improved, providing improved opportunities for people to engage in physical activity (NRW Health., 2020).
Unclear	Possible	Long	As a result of stakeholder engagement (Newport City Council, NRW), safety and perceived safety of the path has been highlighted as important. As a result the scheme was modified during detailed design to have a maximum of 80cm height of the flood wall and amended so that no safety railings were needed (these would have added to the overall appearance of a wall / barrier).
Unclear	Possible	Long	Provision of benches / shelters could lead to gatherings of people that could be intimidating to other users. Anti-social behaviours such as alcohol use and drug taking are possible outcomes. A stakeholder interview (Green and Safe Officer) identified that benches had been removed in the city centre previously (St Pauls Walk), and this decision was controversial. However, benches are needed to improve accessibility. i.e. By all Reasonable Means access guidance (NRW) sets out requirements for rest stops. It is recommended to be a consideration during further community and stakeholder engagement (Newport PSB, Police and NCC Parks Department).
Positive	Speculative	Long	Reducing flood risk to a number of residential and non-residential properties has the potential to lower insurance premiums . Reduced insurance premiums will have a positive impact on household income and lead to a reduce in anxiety and stress from financial pressures (NRW Health., 2020).
Unclear	Speculative	Short - Long	Undertaking robust community engagement/awareness of the scheme will provide opportunities to develop community initiatives which may positively impact upon people's sense of control, neighbourliness and sense of ownership (NRW Health., 2020).
Unclear	Possible	Short to Med	Public consultation was affected by Covid-19, but started online in September 2020. The minimal community engagement to date may have an impact on people's sense of control and ownership of the scheme. Lack of a sense of control is proven to impact on people's mental health (NRW Health., 2020). It is recommended that further community engagement/awareness raising is planned and undertaken prior to the scheme commencing construction.

Living, working and learning

The way we live, work and learn both in and about the natural environment contributes to our well-being and fulfilment, as well as supporting creativity and innovation. Employment, volunteering, placements, education and training in the natural environment can increase physical activity levels, boost mental well-being, develop new skills and knowledge, and enhance our understanding of the sustainable management of natural resources. It can also reduce antisocial behaviour through local community ownership and involvement, as well as playing a vital part in supporting the economy in terms of how we interact and access our services.

Considerations include: community safety; employment, education and training opportunities; working conditions; food and fuel poverty, personal and household debt, local economic conditions; access and quality of services such as public amenities, public transport, active travel, outdoor play areas, leisure and health services.

Impact	Likelihood	Duration	Findings
Positive	Possible	Long	The reduced likelihood of flooding in Liswerry will help maintain and potentially improve the living conditions for residential and non-residential owners and tenants. For example, it will provide opportunities to existing residential and non-residential occupants to invest in their properties and it may also attract new residential and/or non-residential owners/tenants to Liswerry.
Positive	Probable	Long	The scheme is anticipated to reduce the likelihood of flooding events which will have a knock effect on household financial consequences (e.g. need for repair and insurance premiums) and therefore may lead to a reduction in physical and mental wellbeing impacts.
Negative	Possible	Short - Med	The scheme could have an impact upon access to local amenities and service provision such as local health provision to (a limited number of) people, mainly limited to the construction phase. This may be due to reduced access to parking and/or longer travel times by public transport, car, walking and cycling (e.g. closure of floodgate). Therefore, robust community engagement is recommended to understand these potential impacts and possible mitigation. Note – alternatives access routes are being provided, so this impact has already mostly been mitigated through scheme design.
Negative	Probable	Short - Med	The scheme may impact businesses. For example, access to certain business in and around the receiving environment (e.g. Newport Dogs Home and Felnex industrial estate) may be potentially disrupted which will have consequence for staff and volunteers in providing their provision/service. It is recommended that further community engagement is conducted to ascertain the impact and develop mitigation.

Negative	Probable	Short - Med	The Stephenson Street scheme will have short term restrictions on the use of the public rights of way and Wales Coastal Path during the construction phase. This may have impacts on users physical and mental health as access, attractiveness and length of diversions may influence the use of these routes. <i>It is recommended community engagement is implemented to mitigate this, for example, ensure provision of notification of when diversions are likely to happen and signage during closure (include information on how much longer the route may take in term of distance / time.</i>
Negative	Possible	Short - Med	Construction activities may impact upon access and therefore subsequent use of the football pitches. The works have been designed not impact on the pitches themselves, but there will be construction activity in the vicinity (construction activity likely to be very limited at weekends though). This could have impacts on those clubs, groups and individuals who use the pitches for physical and mental health benefits. Further consultation was undertaken with these stakeholders in May 2021, and any impacts to the final designs is to be determined via further discussion.
Positive	Speculative	Long	The scheme has the potential to significantly reduce flood risk to a number of residential and non-residential properties (e.g. Liswerry Health Centre, Schools and shops). By engaging with the community to share this information, it may lead to a positive impact on perceived community safety. <i>Opportunities to work with education providers to develop these resources.</i>
Unclear	Possible	Short - Med	The scheme's Contractors have an opportunity to support local economies in the use of local based suppliers (e.g. Marshalls and Forest Traffic Management) during the construction phases of the project. This could enhance local economic conditions to support the health and wellbeing of the population.
Unclear	Possible	Medium - Long	The scheme may hold opportunities for stakeholders and the community to develop initiatives, which may, for example, support education, community involvement, local employment and volunteering, increasing skills, connectedness with nature and neighbourliness. It is recommended the scheme identifies stakeholders to ascertain the potential opportunities.
Positive	Possible	Long	Stakeholder engagement to date (meeting with manager of Bridge Centre) has identified that the Stephenson Street scheme may hold opportunities for enhancing skills for vulnerable people at the Bridge Achievement Centre. It is recommended further engagement is sought to ascertain these opportunities.
Unclear	Probable	Long	The scheme's planned design of a sheet piled wall was initially a contentious element and was suggested to have potentially caused negative impacts to certain population groups. (Council

			and NRW Consultations). It is recommended the scheme should continue to involve community/stakeholders in the implementation and maintenance to better understand what may be needed by the community and its users.
Unclear	Probable	Long	In order to maximise opportunities for long term benefit, the scheme could seek to introduce initiatives to encourage new users, enhance experience, attractiveness of the area e.g. circular walk around Coronation park, viewing areas, Centenary planting / memorial (NRW consultation). Community engagement was undertaken on final proposals in March 2021.
Unclear	Speculative	Short - Med	Stakeholder engagement has identified that aspects of the scheme design may potentially have impact on homeless people with them being displaced if the area is more heavily used (reference – NRW and NCC site visit). It is recommendation community engagement is undertaken to ascertain the impacts and develop mitigation prior to construction.

The natural and built environment

The environment and infrastructure that surrounds us twenty-four-seven has a huge impact on our health and well-being. Access to green and blue infrastructure can encourage physical activity, improve our mental health and decrease the risks associated with non-communicable diseases. Communities designed with wellbeing in mind tend to have minimal noise levels, better air quality, greater community cohesion and also foster local food production.

Considerations include lasting pollution and regulation e.g. water, land air and noise, water quality, green infrastructure, attractiveness of the area, placemaking and land use planning.

Impact	Likelihood	Duration	Findings
Positive	Probable	Long	Over the life of the flood scheme protection (100 years), it has been assessed that it will reduce flood risk to approximately 900 properties (residential and non-residential). This will retain continuity of access to services/provisions. This will have a positive impact on the population in their ability to interact with these services and provisions to maximise physical and mental health.
Positive	Probable	Long	The scheme provides a new alternative escape route from the flood plain for people potentially trapped by flood water in the industrial area and on the Coastal Path. These long-term measures will preserve human life, reduce anxiety and the need for flooding clean up provisions.
Unclear	Speculative	Long	There is a need to continue consult with stakeholders (e.g. Wales Coastal Path team) and the community on ways to ensure the Stephenson Street scheme does not adversely affect accessibility for any users or have unintended consequences placed upon certain population groups.

Negative	Probable	Short - Med	In the short-term, the construction phase of the scheme will increase land, noise, air pollutants.
Unclear	Probable	Long	The scheme has an opportunity to introduce permanent green infrastructure (e.g. planting of trees, circular walk, play area equipment) to support physical and mental wellbeing. It is recommended that community engagement is undertaken to ascertain how the scheme may support the population to maximise physical and mental wellbeing.
Unclear	Possible	Long	The stakeholder engagement to date has identified that the proposed wall will change the appearance of the Wales Coastal Path (NRW and NCC site visits). This may make people feel unsafe which in turn may potentially lead to users not accessing the path. The project has sought to limit impacts through design decisions e.g. maximum height of wall at 80cm and making the path more inviting by upgrading the surface and cutting back vegetation. It is recommended that community/stakeholder engagement is undertaken to ascertain the level of significance and possible mitigations to ensure the attractiveness of the area is considered. Monitoring of use of the finish scheme will help inform other projects. It is generally expected that the area will feel safer as a result of the works.

Global ecosystems - climate change, biodiversity and the macro-economy

The current climate emergency is having a significant impact on health. We are experiencing an increase in hot weather, a decrease in the number of recorded cold days, and more extreme weather events such as flooding. These can present an immediate risk to life and leave us vulnerable to communicable diseases, as well as having a detrimental effect on our mental well-being.

At the same time, we are also experiencing a nature emergency with a loss of our biodiversity, something that provides us with vital goods and services such as food, medicine and research into diseases, as well as being of significant personal, social and cultural importance to communities.

The macro-economy, government policies and broad global forces also have wide reaching impacts on our way of life.

Impact	Likelihood	Duration	Findings
Positive	Probable	Long	By investing in the scheme, the economic assessment on residential and commercial properties is estimated to save £73 million in today's prices over a 100-year appraisal period (2014 data – Reference: Business Case for Scheme). This will have wide reaching macro-economy benefit and impacts on our way of life (e.g. reduce clean-up costs to multiple responding agencies such as Local Authority, NHS, NRW etc)
Unclear	Possible	Long	The climate and nature emergency pose a constant threat to measures introduced to reduce the incidence and severity of flooding. There will remain an element of uncertainty about the long-term

			sustainability of the scheme as to whether the measures implemented will be sufficient enough to provide the long term intended benefits to residential and non-residential properties over the 100 year appraisal period but it has been modelled extensively by experts using approved techniques so it has been through a robust appraisal.
Negative	Probable	Short - Med	The Stephenson Street constructions works are likely to hold a high carbon cost in the supply chain through to the receiving environment (Scheme Carbon Calculator). This may have detrimental impacts to the land, air and water quality in the area and have far reaching unintended consequences on certain population groups and biodiversity and ecosystems vital for human health (NRW Health., 2020).

Recommendations

- Further community engagement to be undertaken by the contractor prior to construction commencing.
- NRW Health Team recommend a ‘dual approach’ to all infrastructure projects where any potential changes to the environment are accompanied by social changes e.g. promotional / engagement activities. Community participation should be conducted in the design and implementation phases and also built into long term maintenance considerations.
- Communicate the before, during and after activities and outcomes of the scheme(s) with the effected communities and users of the land.

References

1. NRW Health. (2020). An assessment of the effects on health and wellbeing of COVID-19 and control measures, with a specific focus on natural resources and the services they provide for people in Wales. Health Impact Assessment. Available at: https://cyfoethnaturiolcymru.sharepoint.com/:w:/r/teams/are/hw/hia/_layouts/15/Doc.aspx?sourcedoc=%7BBEA9C861-B543-4CA5-ABF3-A2B9E8237FCC%7D&file=EnvCOVID%20HIA-Full%20Report-MASTER%2021.10.docx&action=default&mobileredirect=true [Accessed 15 Dec 2020].

