

Shanklin Coastal Defence Scheme

Frequently Asked Questions

Published: January 2022

Last Updated: November 2024

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Frequently Asked Questions

Where will the scheme be?

The scheme will cover approximately 900m of coastal frontage from the large concrete Hope Groyne at the northern end of the Shanklin Esplanade to Shanklin Chine wooded coastal ravine and nature reserve in the south.

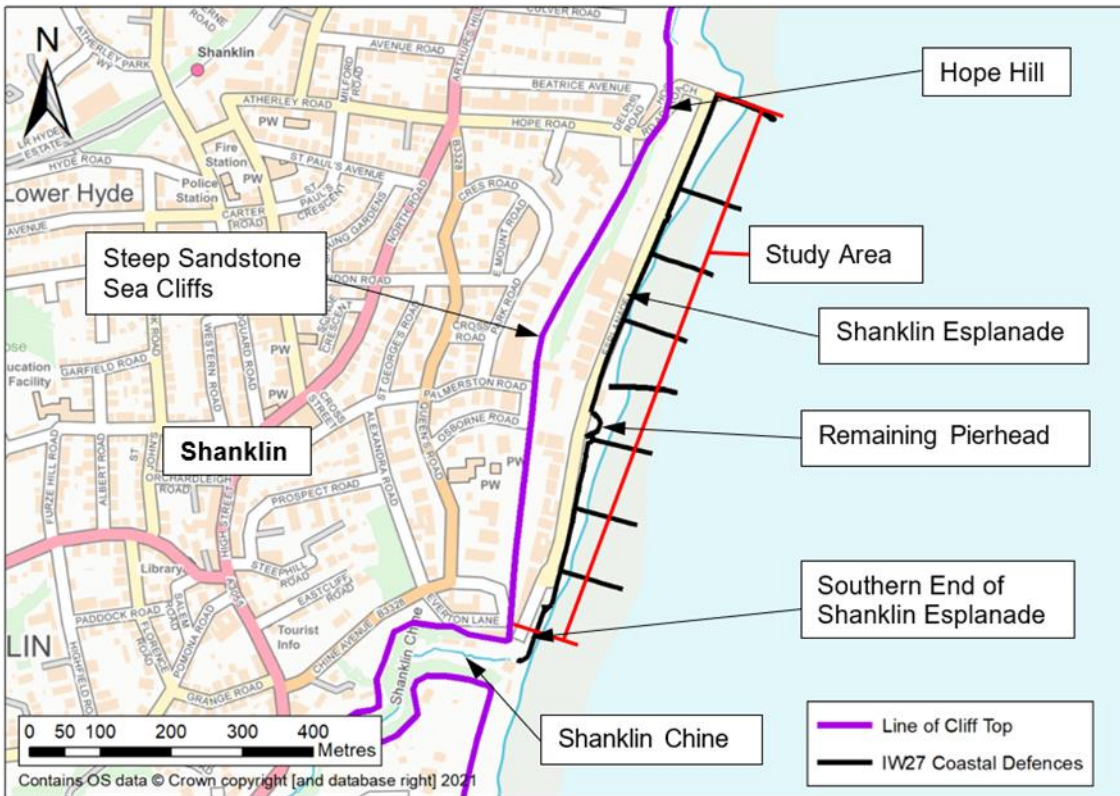


Figure 1 - Shanklin frontage. Scheme area denoted by red line.

Why do we need the scheme? Is doing nothing a viable option?

The current coastal defences (figure 2) are important as they reduce the risks to people and property from coastal erosion and tidal flooding. The seawall, consisting of continuous concrete/masonry block work, was originally built pre 1900s. The concrete groynes are of a similar age (Osborne groyne 1878 and Hope Groyne 1901), whilst the wooden groyne field was completed more recently (1980). Periodic refurbishment of the defences has been completed to extend their useful life; however, major capital works are now needed if the coastal defences are to remain effective.

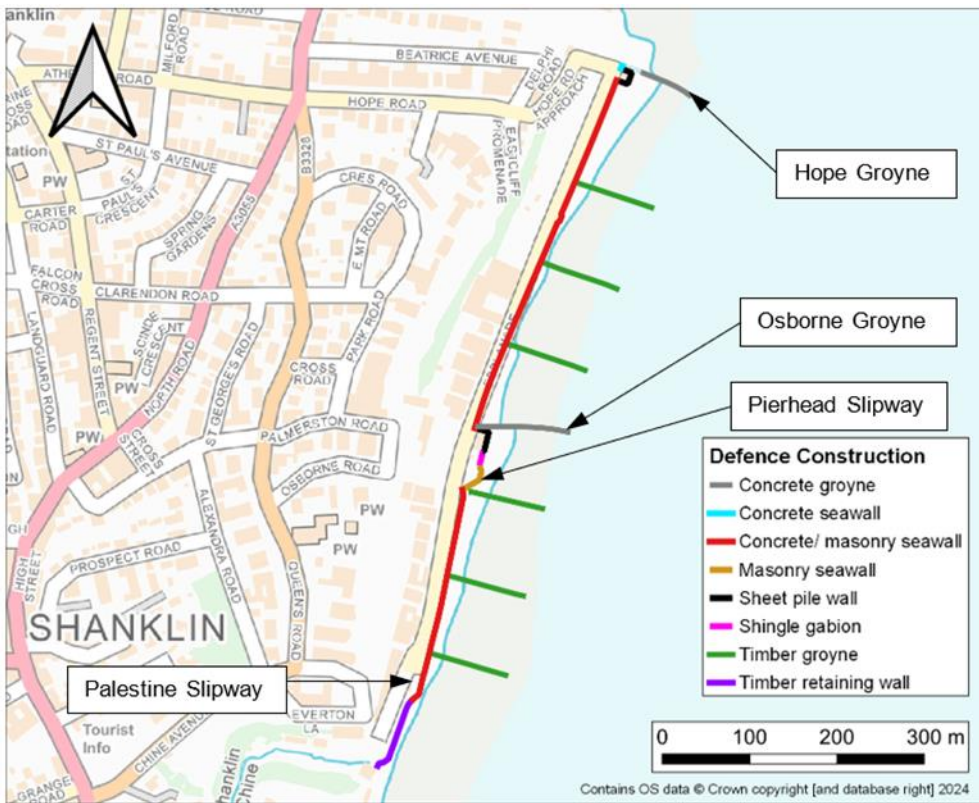


Figure 2 - Shanklin Coastal Defences

We have assessed the condition of both the sea wall and groynes. The seawall is in a poor condition with cracks, voids, exposed fill and widespread damage. The sea wall is at high risk of failure in the short term. The northernmost concrete terminal groyne, Hope Groyne, has already failed, whilst the central concrete groyne, Osborne Groyne, is in 'Fair' condition. The six existing timber groynes are estimated to have a remaining life of less than 5 years without any intervention.



Figure 3 - Poor condition of the existing sea wall (left) and failed Hope Groyne (right)

If significant restorative works are not completed, the sea wall and groynes will continue to deteriorate, resulting in the loss of the defences and the esplanade they currently protect. This would have serious implications for both the habitability of residential properties and viability of businesses located along the frontage.

In the short term, failure of the seawall is likely to result in the loss of the highway immediately behind the seawall; 76 residential and 55 non-residential properties would be permanently cut off. There is no viable alternative vehicular access route, and these properties would therefore effectively be rendered unsafe and uninhabitable.

Loss of the seawall and groynes could also trigger catch-up coastal erosion. The Shanklin Esplanade is reclaimed ground constructed of made ground, which is highly erodible. The coastline may rapidly move to the toe of the sandstone sea cliffs behind the defences. An additional 94 residential and 11 commercial properties on the clifftop are at risk of becoming unsafe and eventually lost to erosion.

What is the impact of climate change?

Sea levels, wave heights and the frequency of winter storms are all anticipated to increase as a result of climate change. More information on climate change can be found: [here](#).

The risk of flooding from the sea over the next 100 years with 1 metre of sea level rise was modelled to improve our understanding of how the risk of flooding in the area may change in the future. It is estimated that without increasing the height of the sea wall, 11 homes and 30 businesses would be at risk of internal flooding from the sea by the year 2121. Raising the height of the sea wall would still leave 5 homes and 18 businesses at risk of internal property flooding from the sea by the year 2121.

The financial analysis has indicated that raising the height of the sea wall is not an economically viable option to take forward currently. As part of the refurbishment project, we will include works which strengthen the foundations of the seawall with the foresight that a decision to raise the height of the seawall may be a viable option in 50 years' time.

Who is responsible for the sea wall and groynes?

The Environment Agency, together with Coastal Protection Authorities (CPAs) such as the Isle of Wight Council, however, this is not a legal obligation. This means that the Environment Agency and the Isle of Wight Council have the 'power to' carry out coastal protection works but is not duty bound to do so. Our ability to exercise these powers is also constrained by the need to take into account the costs and benefits (both tangible and intangible) of any investment, as set out in HM Treasury and Defra guidance. In general, CPAs and the Environment Agency will only act where there is a clear economic benefit and/or an appropriate engineering solution that is achievable, and where environmental legislation is not contravened.

Ownership/maintenance of the sea wall and groynes in the Shanklin scheme area rests with the Isle of Wight Council. Once any scheme is completed, it is intended that the current ownership/maintenance arrangements will continue.

How have you chosen where to deliver coastal flood and erosion risk management schemes?

Flood and coastal erosion risk management infrastructure needs have been assessed for the Isle of Wight coastline through a number of plans, strategies and studies undertaken by the Isle of Wight Council in partnership with the Environment Agency. These help us to decide how and where coastal risks can be reduced, and where it is appropriate to allow the coastline to evolve naturally.

The Isle of Wight Shoreline Management Plan (SMP, 2010) sets the policy for how the risks facing each section of coastline should be managed for the next 100 years.

This is followed by a Flood and Coastal Erosion Risk Management Strategy or Study. The Isle of Wight is divided into three strategy/study areas, where appropriate schemes are identified to put the policies into place, and the high-level costs and benefits are assessed. This work has produced a list of priority schemes in locations where existing flood and coastal erosion walls and embankments are at the most immediate risk of failure, where such a failure would put people, property and the environment at risk, and where the availability of central government funding justifies development of a coastal risk management proposal.

In areas where the SMP and a strategy/study has identified a need for infrastructure improvements but priority schemes are not currently being developed, this may be because sufficient government funding cannot currently be justified, or because there is not an immediate risk and work on these schemes can be commenced once the initial priority schemes are underway.

Where the costs and benefits of a scheme do not currently enable us to justify a significant investment of government funding, both the Environment Agency and the Isle of Wight Council complete routine monitoring and inspections of the structures within our respective ownership. This will continue with the aim of managing any health and safety risks, completing repairs where necessary and affordable, and maximising the life span of these structures.

Are the coastal defences south of Shanklin Chine (study unit IW28) included in the Shanklin Coastal Defence Scheme?

The SMP policy for Sandown and Shanklin is 'Hold the Line', this can be viewed here: <https://environment.data.gov.uk/shoreline-planning/unit/SMP14/PU3C.3#policy>.

An initial appraisal and scheme identification study was completed in 2018¹ for Sandown Bay. This study assessed the costs and benefits of the management approaches available to implement the Hold the Line SMP policy for distinct study units (figure 4) along the frontage.

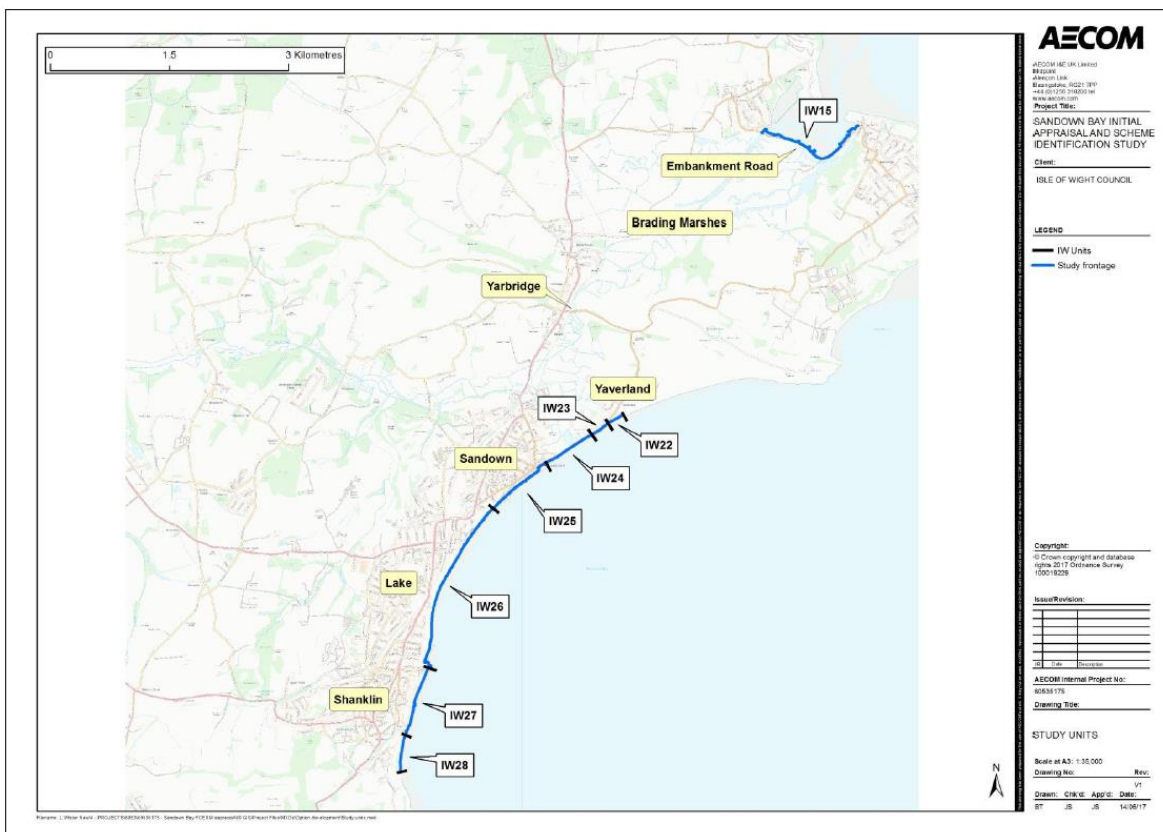


Figure 4 – IW Study Units (Image extracted from Sandown Bay Initial Appraisal and Scheme Identification Study¹)

¹ AECOM Option Appraisal and Scheme Identification Report. Sandown Bay Initial Appraisal and Scheme Identification Study (Reference: 60535175 / OP001 Date: May 2018)

The study Unit IW28 is 457m long and is located to the south of Shanklin Esplanade, extending from Shanklin Chine southwards to approximately the position of Luccombe Hall (located on the cliff top). This study unit is a transition between the hard sea defences (timber revetment and groynes) to the north and the undefended cliffs to the south.

The Sandown Bay study² concluded that the leading economic option for the coastal defences south of Shanklin Chine was the 'Do Minimum' option. The Do Minimum option involves small scale reactive maintenance and 'patch and repair' work to the existing timber revetment and groynes to extend their remaining life alongside the continued small scale cliff stabilisation measures. The Do minimum option has the highest benefit cost ratio of the short listed options.

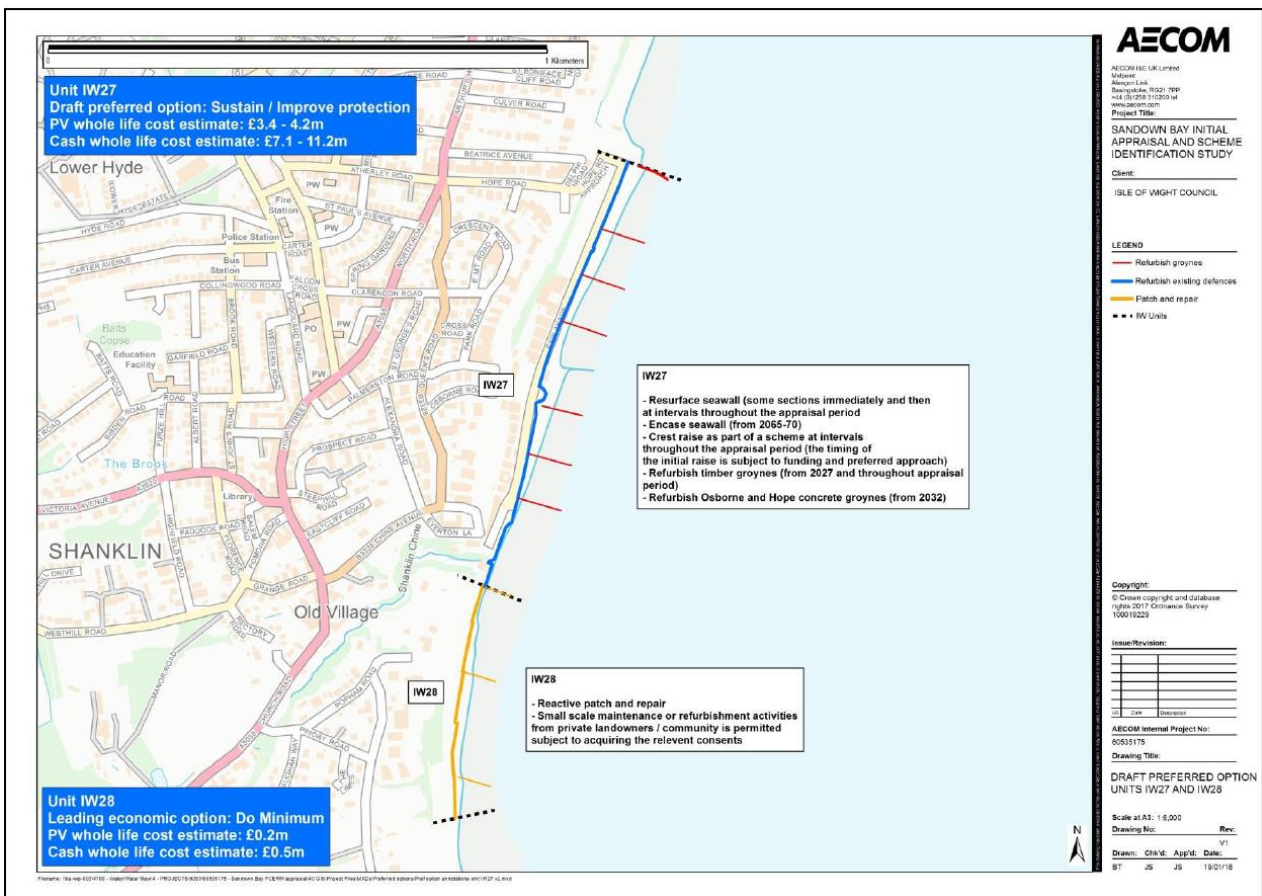


Figure 5 - Leading economic option for IW28 (Shanklin Chine to Luccombe Hall) ²

It is not economically justifiable to implement a 'do something' option such as maintaining, sustaining or improving the coastal defences. This is because the number of properties at risk is limited compared to the cost of the works required to better protect them from

² AECOM Option Appraisal and Scheme Identification Report. Sandown Bay Initial Appraisal and Scheme Identification Study (Reference: 60535175 / OP001 Date: May 2018)

coastal erosion. In addition, most properties at risk along the cliff tops are anticipated to be affected in the longer term rather than the shorter term. The Sandown Bay study estimates that just 2 properties are at risk of coastal erosion by 2057 and 28 properties at risk by 2117. This means that central government funding (known as Flood and Coastal Erosion Risk Management Grant in Aid funding) is not available for this section of coastal defences. For this reason, the timber defences just south of Shanklin Chine are not included in the Shanklin Coastal Defence Scheme currently being progressed by the Environment Agency and Isle of Wight Council.

The current Shoreline Management Plan policy for the existing coastal defences south of Shanklin Chine is to Hold the Line, therefore refurbishment activities from private landowners / the local community would be permitted under this SMP policy, subject to acquiring the relevant consents.

The Isle of Wight Council complete routine monitoring and inspections of the structures. This will continue with the aim of managing any health and safety risks, undertaking repairs where necessary and affordable, and maximising the life span of these structures.

How will the Shanklin Coastal Defence scheme be funded?

On behalf of the UK Government, the Environment Agency prioritise and allocate funding to flood and coastal erosion risk management (FCERM) schemes using a partnership funding approach. Securing funding is dependent on the benefits and outcomes delivered by a scheme. Funding contributions from other sources such as local levy (raised by the Regional Flood and Coastal Committees), private and public organisations and/or the local community, may be required to enable the release of FCERM Grant in Aid funding (FCERM GiA).

When calculating the benefits (also described as flood or erosion damages avoided) a FCERM scheme delivers, a baseline must first be established. This can be thought of as 'what would be at risk if we did nothing?'. This process considers the maximum area likely to be impacted, and in the case of flooding, to what depth and for what duration. The next stage is to explore land use i.e. what will be affected by flooding or erosion. This could include, but is not limited to residential properties, commercial properties including retail, warehouses, industry, road and rail networks and utilities such as gas, electricity, telecoms and water supplies. Additionally, recreation, education and health services damages are incorporated along with local authority and emergency recovery costs. Finally, agriculture and environmental damages are also captured. Damages can be defined as direct or indirect, where direct damages include physical impacts, and indirect damages can be realised beyond the area immediately affected e.g. failure of a sewerage treatment works could have far reaching effects.

Once the total amount of damages has been calculated the actual cost of the proposed works and the period of time the scheme will be effective for are all considered. Finally, a tariff system is employed to determine exactly how much FCERM GiA a scheme can

ultimately attract. Currently, the assets attracting the greatest proportion of FCERM GiA are residential properties, with additional sums also being made available for those properties located in the nations most deprived areas.

More information relating to FCERM GiA partnership funding can be found here:

<https://www.gov.uk/guidance/partnership-funding-for-fcerm-projects>

Are you going to be working with others on this project?

We will be working closely with our partners, stakeholders and the wider community throughout the delivery of the scheme.

Since September 2020 we have formed an Integrated Delivery Team made up of industry experts from the Environment Agency, Isle of Wight Council, JBA Consulting and VolkerStevin.

The views of the local community will be key in ensuring the successful delivery of this coastal erosion scheme. If you would like to contact the delivery team with any specific question not covered here or would just like to be kept informed throughout the scheme's development, then please [email us](#).

When will the construction work take place and how long will it last?

Construction work is estimated to commence in 2026/27, if scheme funding can be obtained. These are preliminary dates that will be subject to change as plans progress, and we will work with our partners and stakeholders to agree acceptable timings for construction activities.

What are you building? What will it look like? Will the works affect access to the seafront and beach? How will the works impact tourism?

The works would be expected to involve resurfacing the seawall and refurbishment of the wooden groynes and concrete groynes. However, the design is still being developed, so we do not yet know for certain what the works will look like, how long the work will take, or the type of machinery required. We will speak with residents, businesses and other key organisations, such as infrastructure providers, who might be affected by this scheme to understand concerns and collaborate so that we can minimise any potential disruption to them.

Will the beach be the same after the works?

As the design is still being developed, we do not yet know for certain what the works will entail, and how the beach will be affected. We understand the importance of the beach, not only for tourism and recreation and because it is an integral part of the town's character, but also the benefits it offers for flood defence. The groyne, which help retain beach material, are near to the end of their useful life and are in need refurbishing. This is, however, likely to be expensive and would need to be justified in terms of the benefit it would bring to reducing erosion and flood risk in order to qualify for some Government Grant in Aid funding. We will be looking at the how we balance these issues, working closely with stakeholders and the Isle of Wight Council to do this.

What will the environmental impact of the scheme be?

We are committed to protecting and enhancing the environment through all we do. The Environment Agency's ambition for how we plan to create better places for people, wildlife and the environment is set out in our 5 year plan: EA2025 creating a better place, found here: <https://www.gov.uk/government/publications/environment-agency-ea2025-creating-a-better-place>

The requirement for the provision of 10% Biodiversity Net Gain is now a legal requirement for developments requiring planning permission. This means that development must leave biodiversity in a measurably better state than before. Other environmental enhancements will also be considered where funding is available. This reflects the Island's biosphere designation and the growing desire of the Environment Agency to deliver schemes that enhance the environment as well as performing a coastal defence role.

How can local businesses get involved?

Our procurement mission statement can be found [here](#). We are committed to supporting small island-based businesses. We also encourage our larger suppliers to consider small and medium sized enterprises (SMEs) in their sub-contracting opportunities.

Under our Next Generation Supplier Arrangement, the Environment Agency have appointed Jeremy Benn Associates Ltd (JBA) and VolkerStevin Ltd (VS) to help deliver our flood and coastal defence programme in the South East. Currently, we are still developing a design and don't yet know what any construction works will entail. Once options progress, we will provide more detail on how SMEs can get involved.

How can I find out more?

Throughout this project there will be numerous opportunities for you to feed into its development. We will continue to increase the level of communication with you and update you with progress.

We would encourage all interested parties in the area and neighbouring communities to sign up to updates by registering your interest at IOW_FDschemas@environment-agency.gov.uk. We would also encourage you to support any family members, friends or neighbours who cannot access online information, by sharing our updates with them.

Would you like to find out more about us or your environment?

Then call us on

03708 506 506 (Monday to Friday, 8am to 6pm)

Email: enquiries@environment-agency.gov.uk

Or visit our website

www.gov.uk/environment-agency

incident hotline

0800 807060 **(24 hours)**

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0345 988 1188 **(24 hours)**

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