

# Laxey Climatic Change, Fluvial, Coastal and Highway Flood Prevention Measures

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Government**

*Reilys Ellan Vannin*



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# Laxey Flood Alleviation Scheme

21<sup>th</sup> October 2021

Speakers: Neil Caine, Jeffrey Robinson and Aidan McCusker



**IOM  
FLOOD  
HUB**

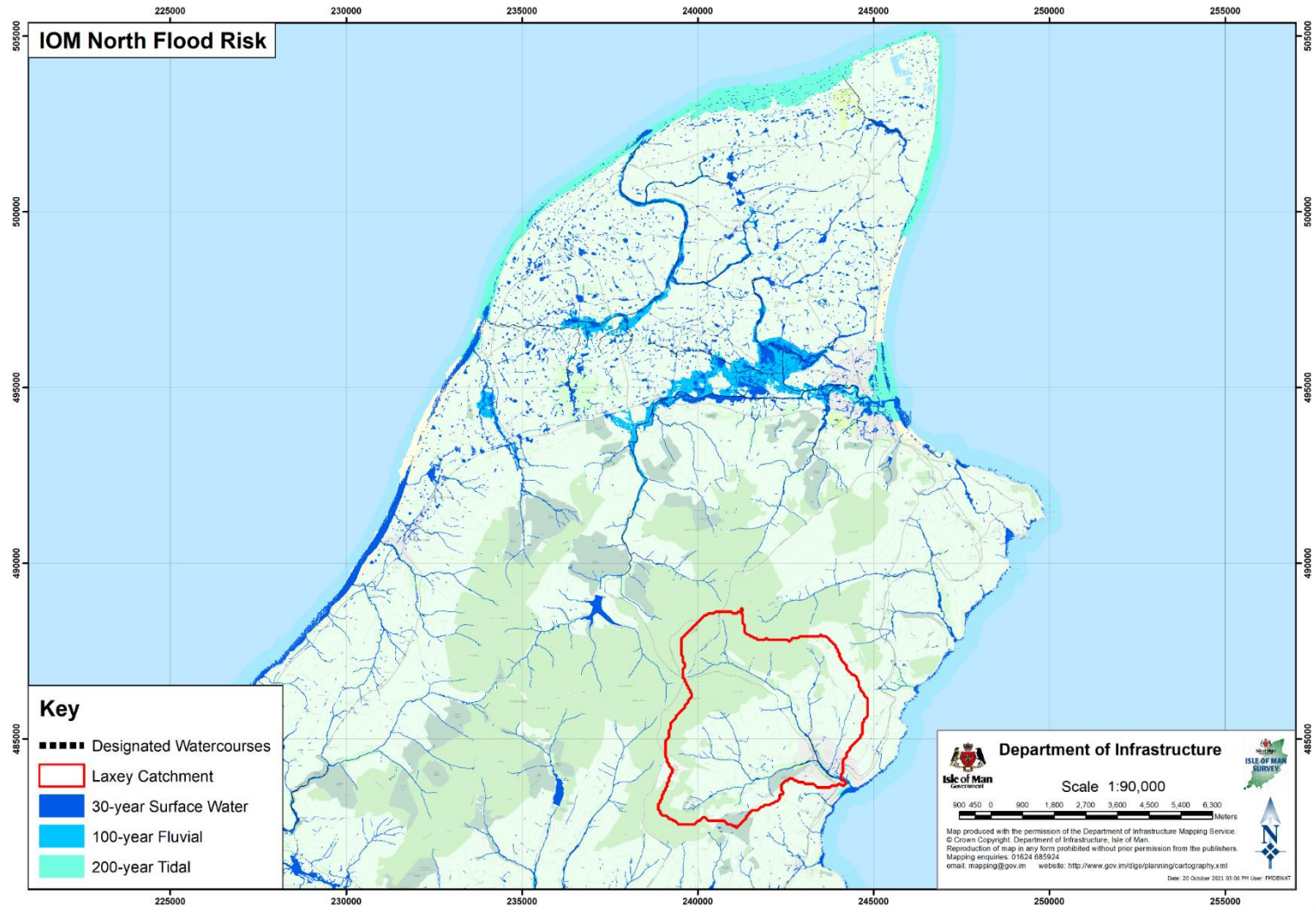


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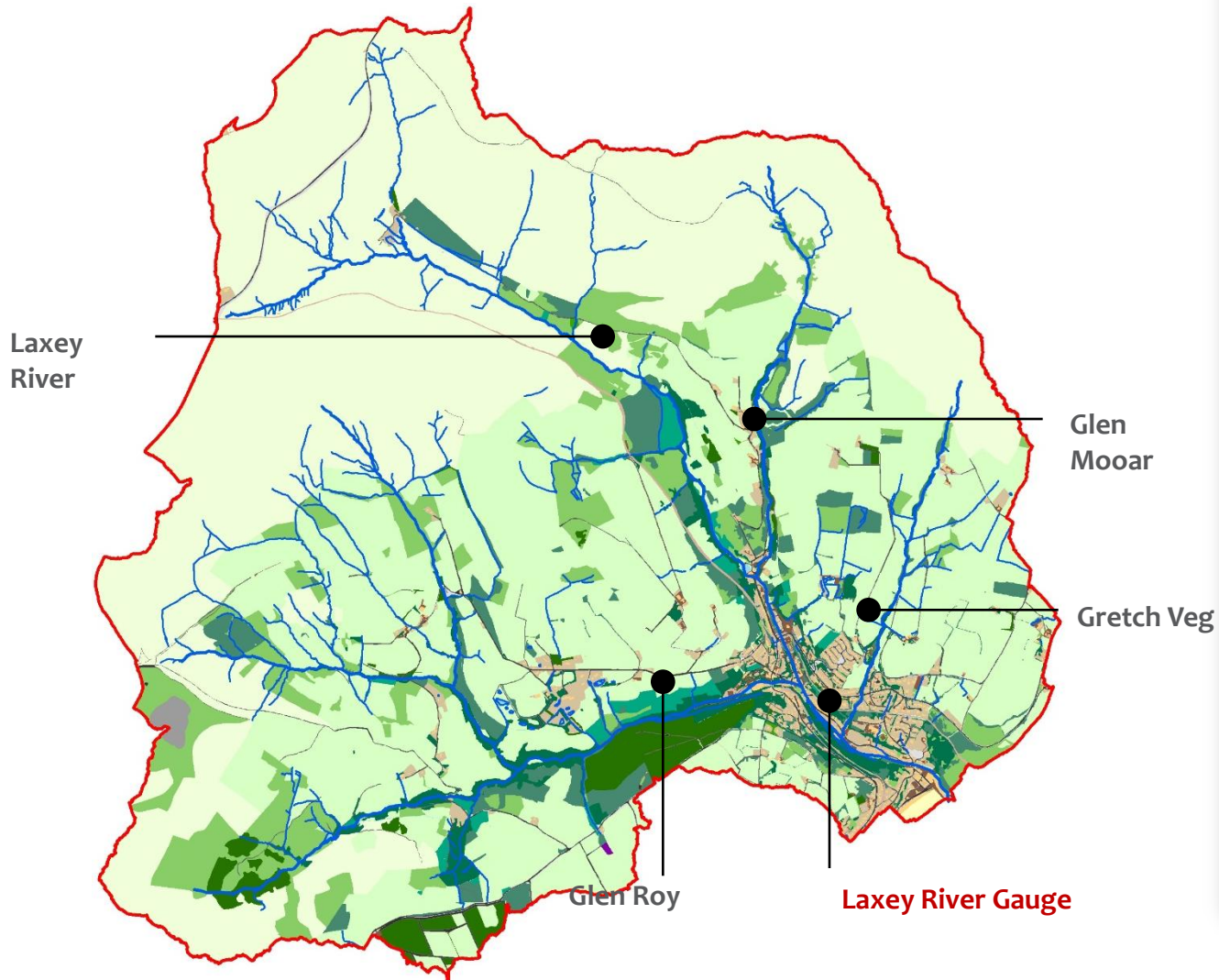


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# Laxey Catchment in Context



## Catchment Information



### Catchment information

Catchment area

**= 24km<sup>2</sup>**

Geology and soils =

Manx slate series and  
seasonally saturated soils

Average annual rainfall =

**1600mm**

Average catchment slope

**= 1 in 5**

100-year flow estimate  
(at Laxey gauge)

**= 70m<sup>3</sup>/s**

Cubic metres per second



# Overview of Presentation

- ❑ **Laxey Glen Road Flood Prevention works**
- ❑ **Laxey Harbour and Coastal Flood Alleviation works**
- ❑ **Laxey Minorca Hill Prevention measures**
- ❑ **Upper Laxey catchment Flood Management**

# Laxey Flood Defences

21st October 2021



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**Debris catcher in Glen Roy River**





**Woollen Mills River Wall**





**Gretch Veg with river restoration**





**Gretch Veg with river restoration**





**Rock Ramp**





**River access gate**





**Victoria Terrace - surface water drainage**

# Future Works

















# Laxey Harbour & Promenade Still Water Overtopping and Wave Overtopping Prevention

21st October 2021



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# Introduction to Laxey Harbour

- ❑ **Existing quay walls on Inner Harbour provide access to boat users whilst offering some protection against flooding.**
- ❑ **Laxey Harbour is at risk of still water level flooding during the 1 in 100 year event in present day conditions and a 1 in 1 year event in 2115 which highlights the need for defence improvements in the future.**
- ❑ **Combined still water and wave overtopping protection is required.**

# Option Appraisal Laxey Harbour

- ☐ **Setback walls around harbour**
- ☐ **Tidal gate**
- ☐ **Raised Quay wall**

# Progress to date

- ☐ **Wave overtopping studies – complete.**
- ☐ **Options appraisal – complete.**
- ☐ **Design of preferred option – complete.**
- ☐ **Consultations with Laxey Commissioners – ongoing.**

# Future Works

- ☐ **Further consultation with Laxey Commissioners and Public.**
- ☐ **If public perception is positive submit Planning Application and start works in 2023.**



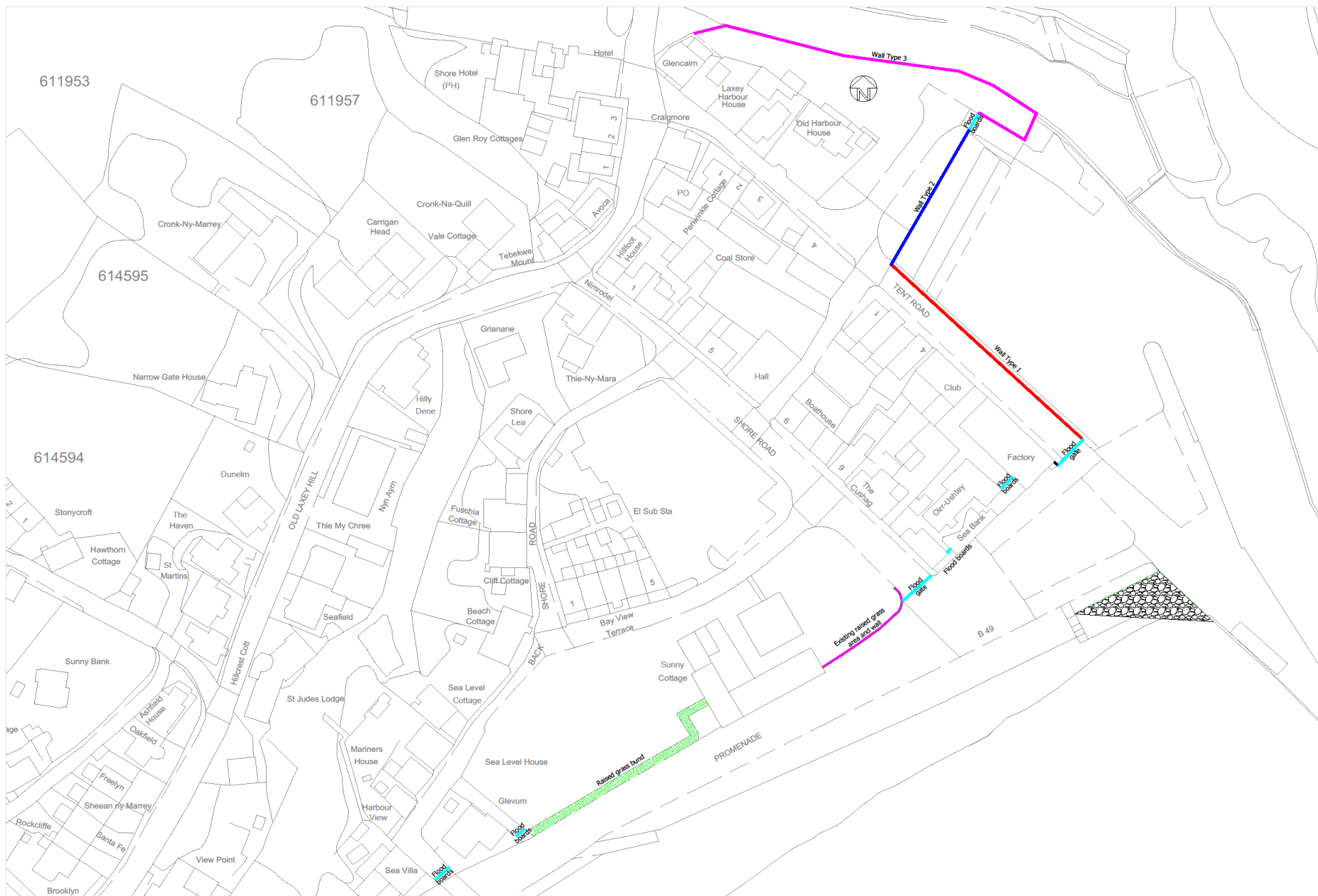
# Introduction to Laxey Promenade

- ❑ **Existing defences comprise a small concrete sea wall fronted by concrete stepped revetment.**
- ❑ **Wave studies have highlighted the need for defence improvements in the future to reduce the risk of wave overtopping.**
- ❑ **Wave overtopping issues are exasperated at the Northern end where the beach has been drawn down exposing the revetment.**

# Option Appraisal Laxey Promenade

- ☐ **Option A raise existing Sea Wall.**
- ☐ **Option B construct new Sea Wall.**
- ☐ **Option C setback wall on the properties side of Highway.**
- ☐ **Option D setback wall 3m behind existing Sea Wall.**
- ☐ **Rock Revetment.**
- ☐ **None of above.**

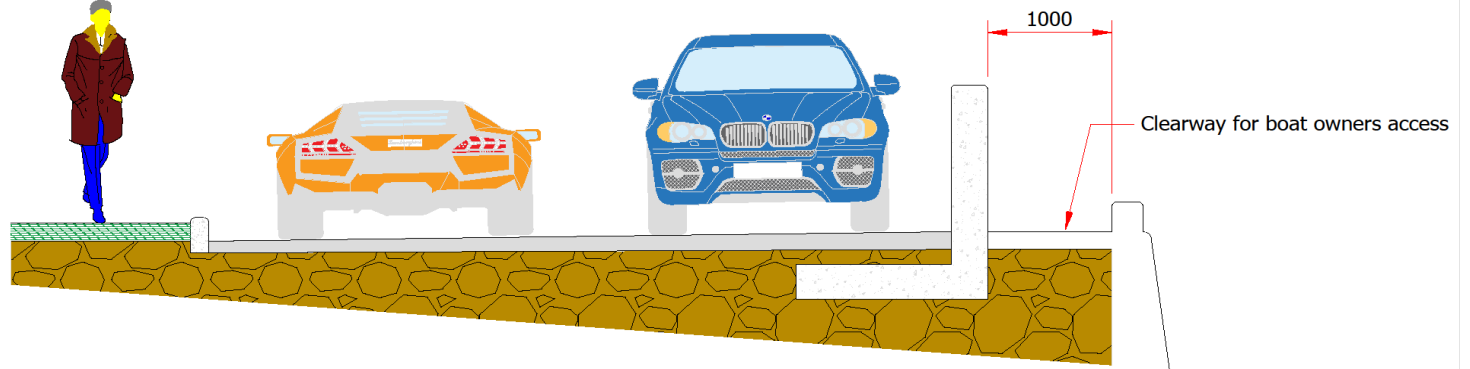




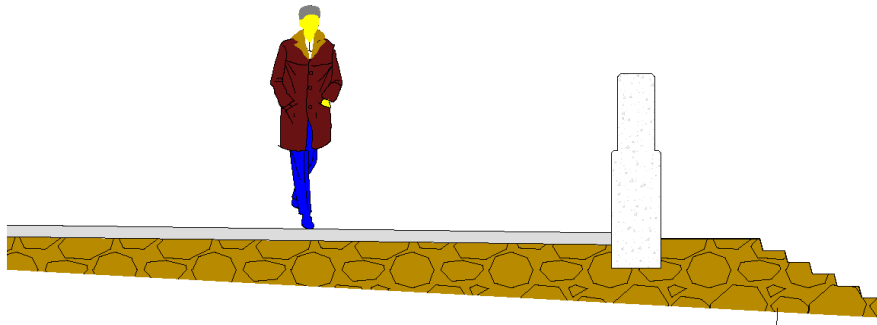
## Proposed Walls & Flood Gates



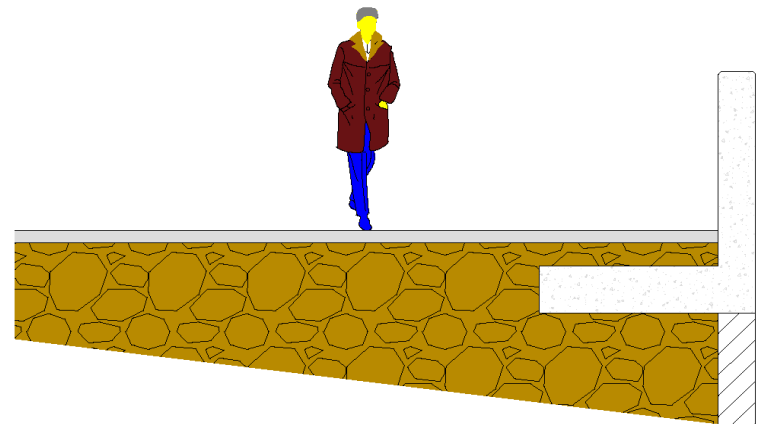




Section Showing Proposed Wall Type 1 Along Tent Road

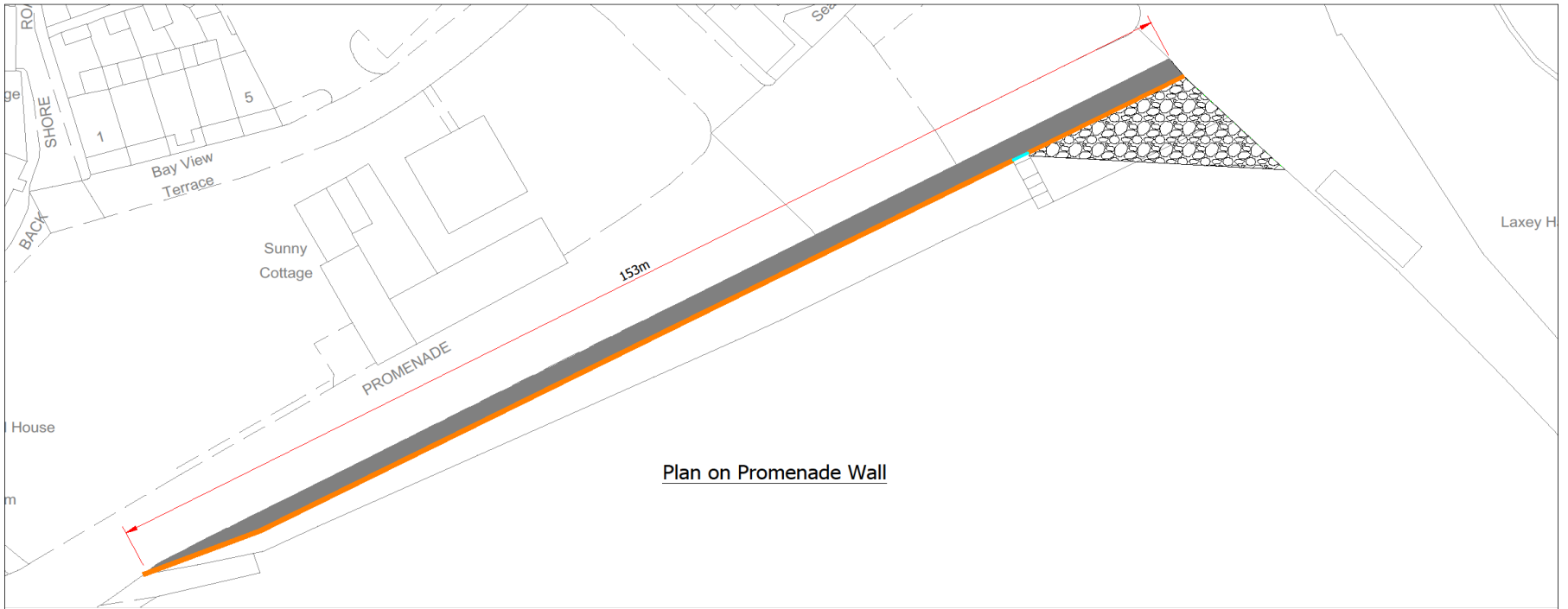


Section Through Wall Type 2 Along Front of Boat Park

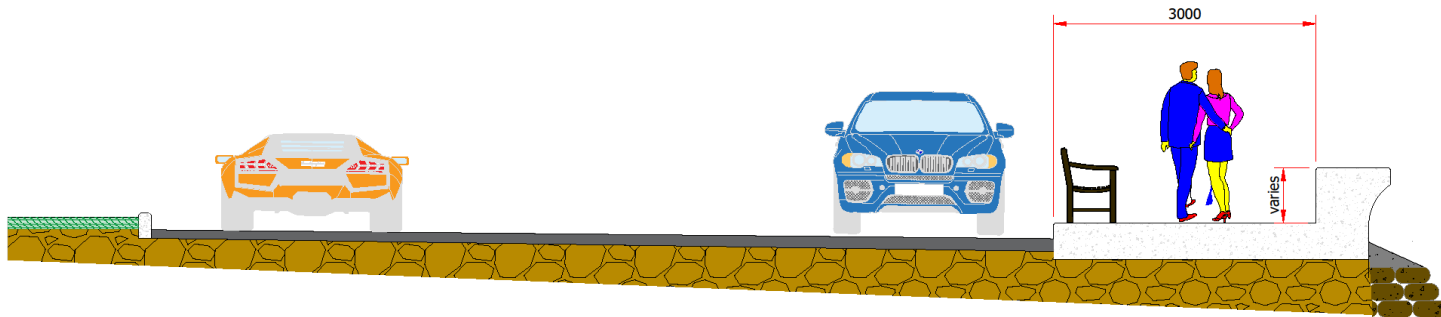


Section Through Wall Type 3 Along Side of Boat Park

## Detail of Proposed Harbour Walls



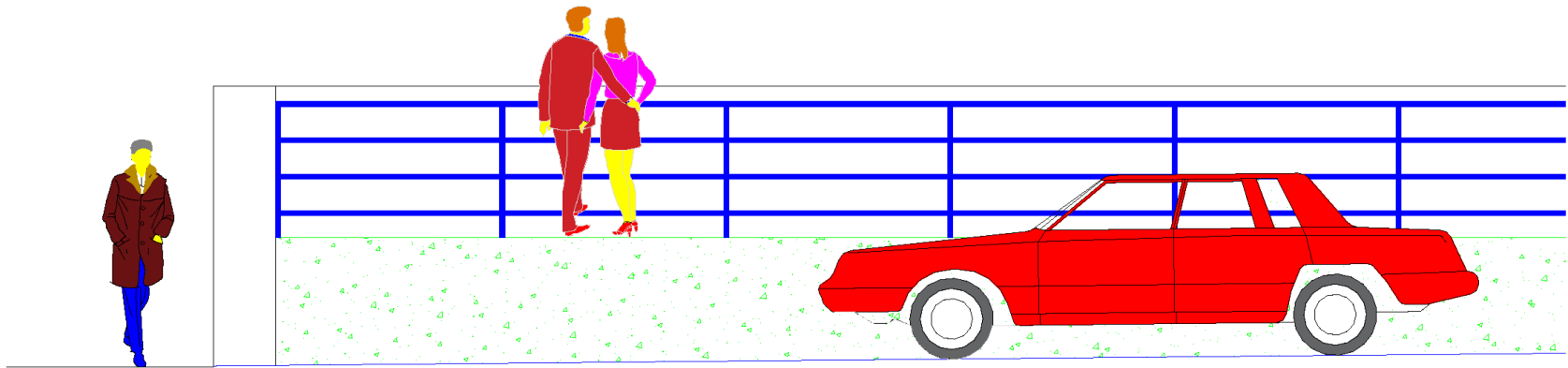
Plan on Promenade Wall



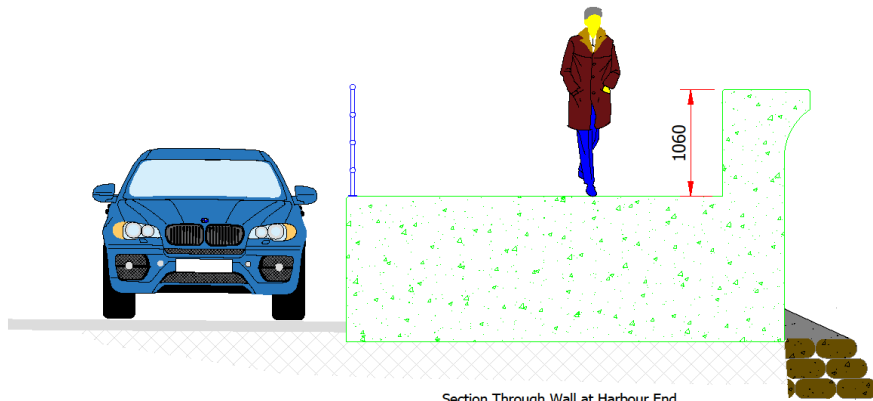
Section Showing Existing Promenade Walkway and Wall

## Existing Promenade Wall

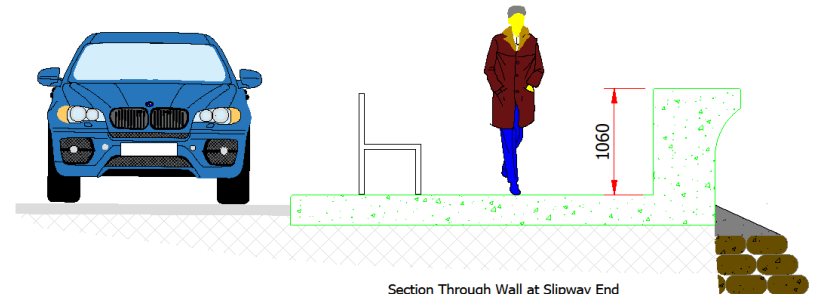




Detail of Proposed Wall with Raised Walkway at Harbour End



Section Through Wall at Harbour End  
With Raised Walkway



Section Through Wall at Slipway End  
With or Without Raised Walkway

## Proposed Promenade Wall



**Proposed Set Back Wall & Flood Gates**



# Progress to date

- ☐ **Options appraisal completed.**
- ☐ **Planning Application prepared and withdrawn following concerns raised by the MUA.**
- ☐ **Options revisited.**

# Future Works

- ☐ **Complete the consultation with Laxey Commissioners and the general public.**
- ☐ **Agree the way forward with the Laxey Commissioners representing the Laxey residents and progress accordingly.**



# Highway Drainage Works

# Scope of works

- ❑ **Highway drainage works to include the installation of a new surface water drainage systems :-**

**Lower Minorca Hill**

**Quarry Road**

**Lower Ballaragh Road**

**Laxey – Ramsey Road**



# Progress to date

- ☐ **Design complete for Lower Minorca Hill with works due to commence on 1<sup>st</sup> November 2021.**
- ☐ **Design complete for Lower Ballaragh Road with works due to commence early 2022.**
- ☐ **Design almost complete for Quarry Road with works due to start in November 2021.**







STOP









# Upper Catchment

- ☐ **Works in Upper Catchment for the remainder of Laxey is the subject of the displays which the Department's Officers will be happy to discuss following this presentation.**



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Thank you for your attention.

Any Questions?

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