

The Moors at Arne Project

Stakeholder Liaison Group
Meeting 5
9 October 2019



giving
nature
a home



Environment
Agency

NATURAL
ENGLAND

Stakeholder Liaison Group

Agenda

1	Introductions	5 mins
2	Review of notes from last meeting	5 mins
3	Brief project update and discussion	5 mins
4	Environmental Impact Assessment (EIA) screening and scoping opinion	20 mins
5	Flood Risk (Freshwater) update	20 mins
6	Public Access update	15 mins
7	Open Forum	10 mins
8	Next steps and date of next meeting	5 mins

The Moors at Arne Project



Brief Project Update

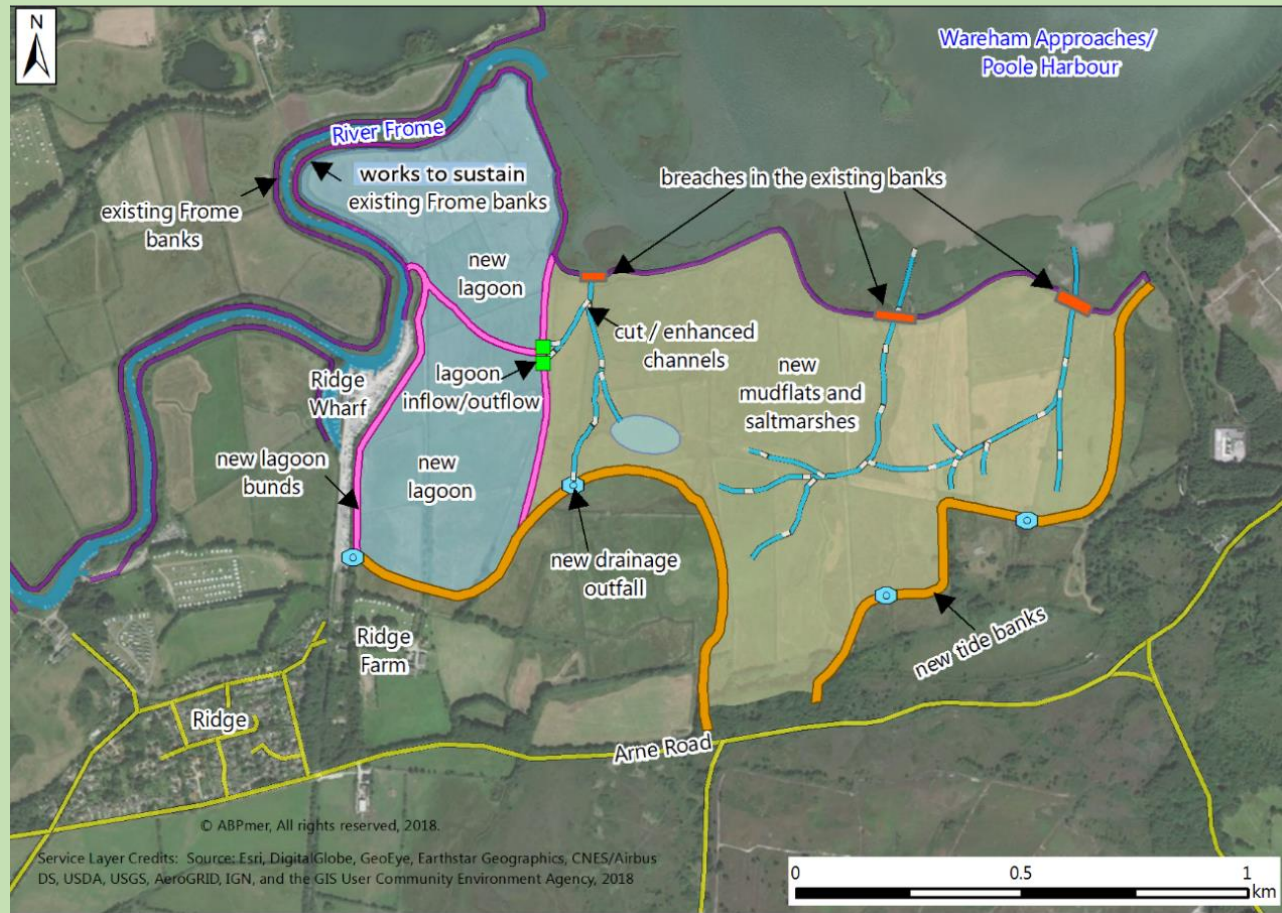
Ongoing work:

1. Continued monitoring of ground and surface water levels
2. Bathymetry survey
3. Environment Agency Assurance (Outline Business Case submitted for approval)
4. Appointment of detailed design consultant and contractor team

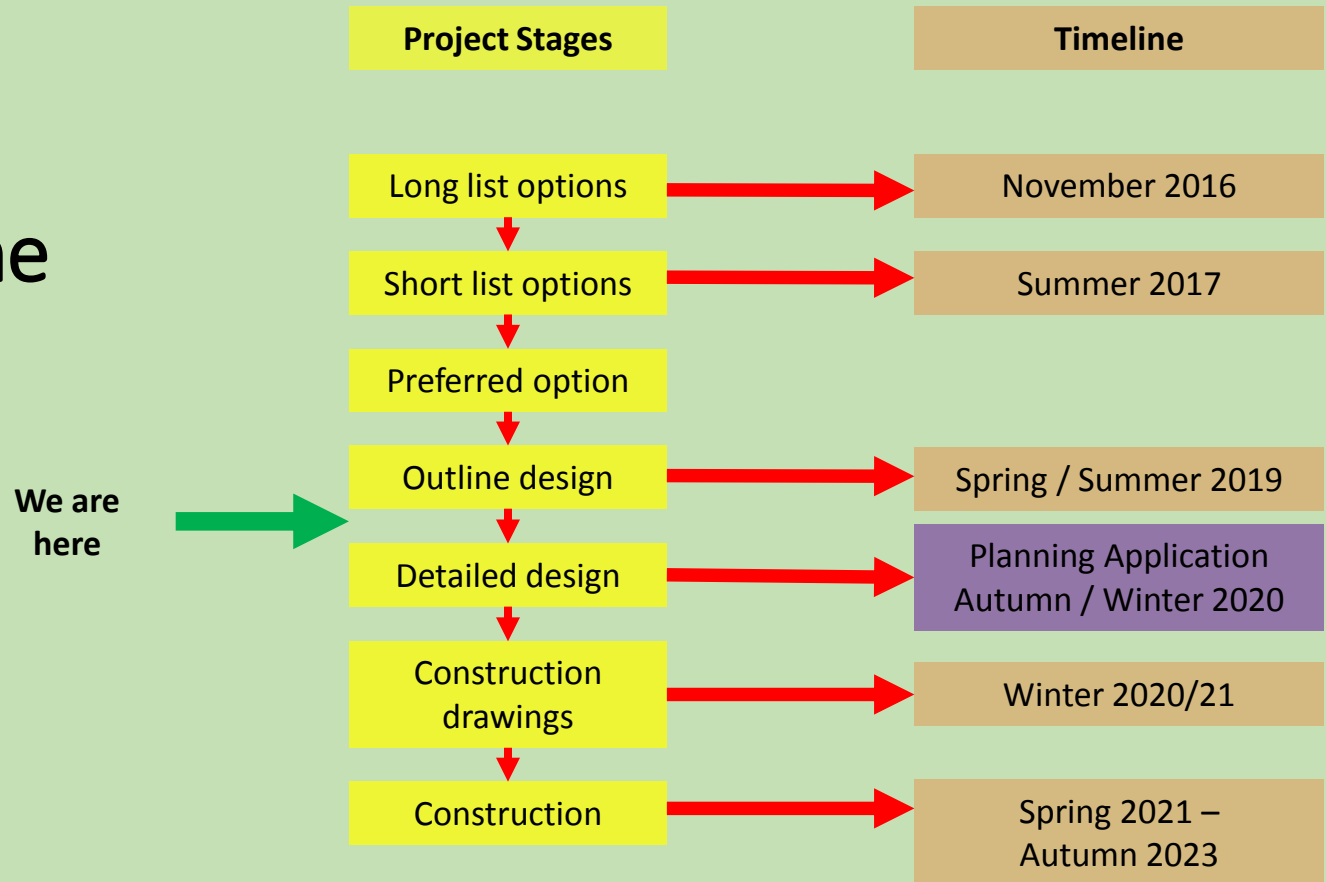


Brief Project Update

No changes to bank alignments.



Programme



The Moors at Arne Environmental Impact Assessment Screening & Scoping Request



EIA Screening

The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 No. 571 (As amended by SI 2018 No. 695 and SI 2018 No. 1232)

Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended) / Marine Works (Environmental Impact Assessment) (Amendment) Regulations 2017

We consider that the proposed scheme is a Schedule 2 development listed as 10 (m): Infrastructure and classed as *'Coastal work to combat erosion and maritime works capable of altering the coast through the construction, for example, of dykes, moles, jetties and other sea defence works, excluding the maintenance and reconstruction of such works'* under the EIA Regulations.

We have sort agreement with our view from:

- Local Planning Authority
- Marine Management Organisation.





EIA Scoping

Scoping is the process within Environmental Impact Assessment whereby the environmental issues that are to be the focus of the assessment are identified.



Scoping involves:

- developing an understanding of the main impacts, issues and opportunities specifically associated with the development;
- providing an opportunity for internal and external stakeholders to provide opinions about the likely significant impacts of a proposal, data and assessment needs and constraints;
- in association with stakeholders, identifying the information necessary and methodology to be used to assess the environmental effects; and
- Determining the activities to be undertaken during the next stages of the assessment process.



Screening & Scoping Request

The Moors at Arne

Potential significant impacts at The Moors at Arne

Following a desk-based review of available environmental data for the site, supported by technical investigation and surveys it is considered that the following environmental aspects may be impacted (either positively or negatively) as a result of The Moors at Arne Scheme. Therefore, these topics have been scoped into the EIA for further assessment:

- Population, access and transport (including navigation)
- Biodiversity, flora and fauna
- Fisheries
- Water environment (it should be noted that a Water Framework Directive (WFD) assessment will be developed as part of the scheme. A separate Flood Risk Assessment will also be prepared)
- Geology, soils and hydrogeology
- Cultural heritage and archaeology
- Climate change
- Landscape and visual amenity
- Air quality and noise
- Human Health
- Use of natural resources
- Waste
- Cumulative effects.

The likely magnitude, spatial and temporal nature of the anticipated significant impacts will be set out in detail in the Environmental Statement, and the full range of mitigation measures will be considered throughout the EIA process.

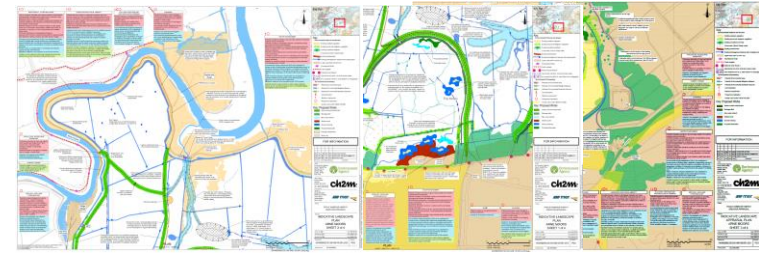


Table 1 Environmental topics scoped out for The Moors at Arne

Topic	Sub-topic	Scoped in/out	Why?
Biodiversity, flora & fauna	Marine mammals (construction & operation)	Scoped out	Marine mammals have been scoped out due to no underwater noise disturbance during construction being expected, and potential water quality changes are not expected to be of a scale to impact marine mammals.
Fisheries	Commercial fin fisheries (construction & operation)	Scoped out	Commercial fin-fisheries have been scoped out due to no significant impacts being expected.
Air Quality	Construction and operation air quality	Scoped out	It is considered unlikely that there will be impacts in relation to air quality which cannot be controlled by the adoption of established construction mitigation practices.
Noise	Operation noise	Scoped out	There are no anticipated operation noise impacts once the managed realignment is complete. It is therefore proposed that these receptors are not included within the scope of the EIA.

Screening & Scoping Request East Stoke

Potential significant impacts at East Stoke

It is considered that the following environmental aspects may be impacted (either positively or negatively) as a result of the East Stoke Scheme. Therefore, these topics have been scoped into the EIA for further assessment:

- Population, access and transport (including navigation)
- Biodiversity, flora and fauna
- Fisheries
- Water environment (it should be noted that a Water Framework Directive (WFD) assessment will be developed as part of the scheme. A separate Flood Risk Assessment will also be prepared)
- Geology, soils and hydrogeology
- Cultural heritage and archaeology
- Climate change
- Landscape and visual amenity
- Air quality and noise
- Human Health
- Use of natural resources
- Waste
- Cumulative effects.

The likely magnitude, spatial and temporal nature of the anticipated significant impacts will be set out in detail in the Environmental Statement, and the full range of mitigation measures will be considered throughout the EIA process.



Table 2 Environmental topics scoped out for East Stoke

Topic	Sub-topic	Scoped in/out	Why?
Biodiversity, flora & fauna	Marine mammals (construction & operation)	Scoped out	Marine mammals have been scoped out due to no underwater noise disturbance during construction being expected, and potential water quality changes are not expected to be of a scale to impact marine mammals.
Fisheries	Commercial fin fisheries (construction & operation)	Scoped out	Commercial fin-fisheries have been scoped out due to no significant impacts being expected.
Air Quality	Construction and operation air quality	Scoped out	It is considered unlikely that there will be impacts in relation to air quality which cannot be controlled by the adoption of established construction mitigation practices.
Noise	Operation noise	Scoped out	There are no anticipated noise and air quality impacts once the managed realignment is complete. It is therefore proposed that these receptors are not included within the scope of the EIA.

Screening & Scoping

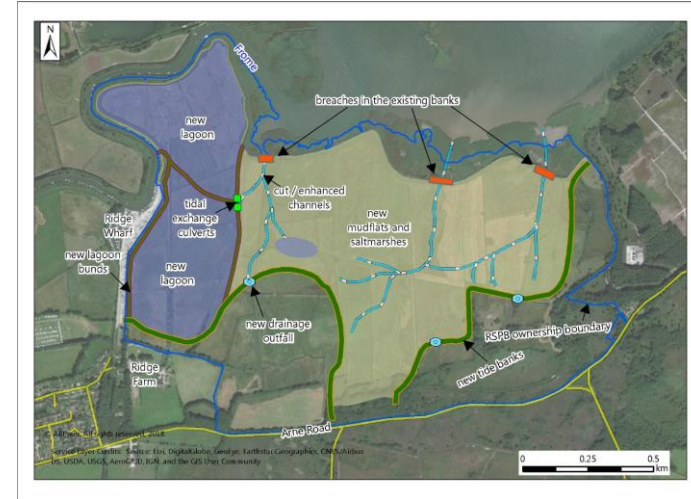


- Formal response from Dorset Council due imminently
- Six responses on the Planning Portal
- Update at the next SLG
- MMO response expected Jan 2020

<https://planningsearch.purbeck-dc.gov.uk/Planning/Display/EA1/2019/0005>

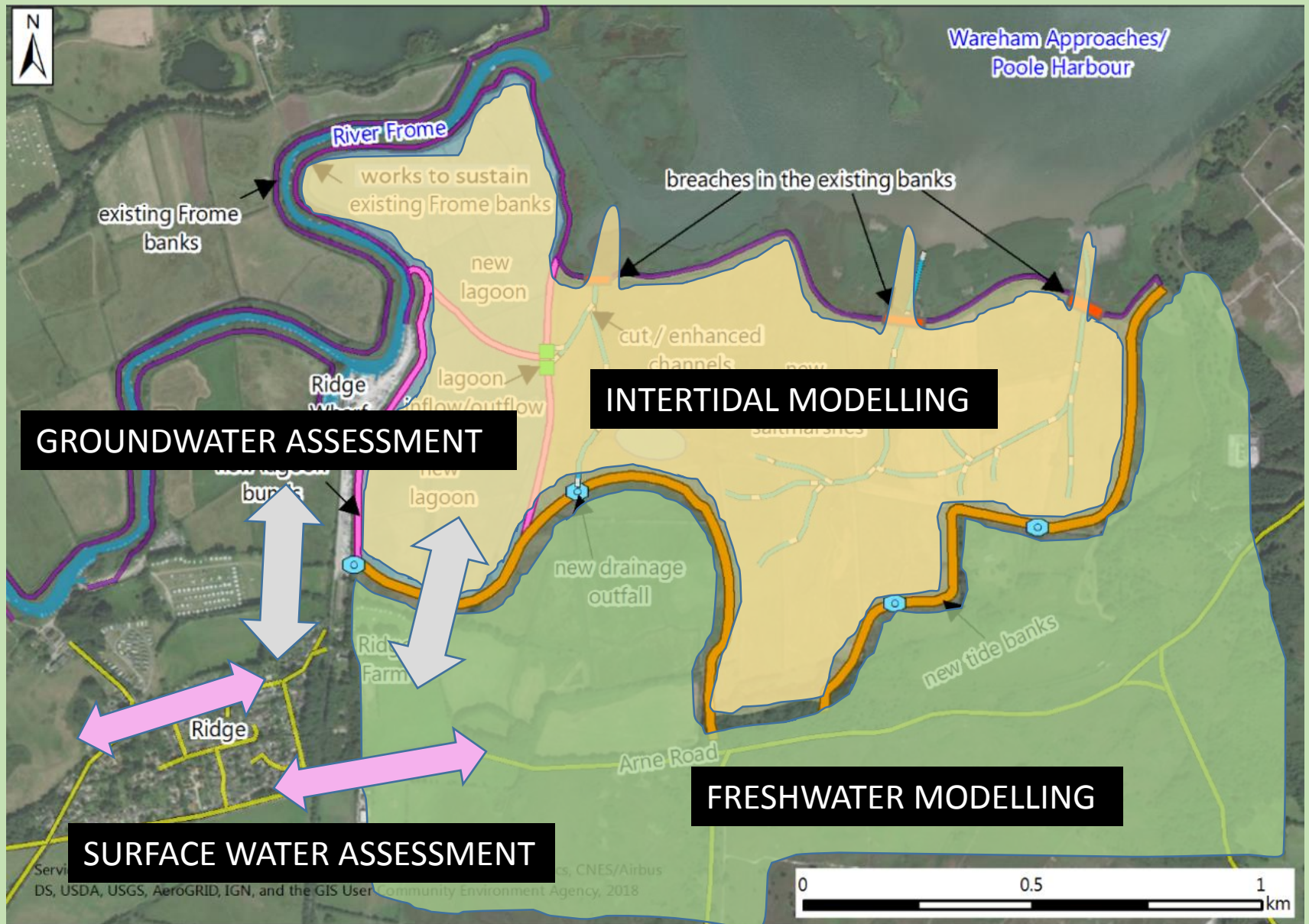
<https://planningsearch.purbeck-dc.gov.uk/Planning/Display/EA2/2019/0001>

Marine Management Organisation case number EIA/2019/00028

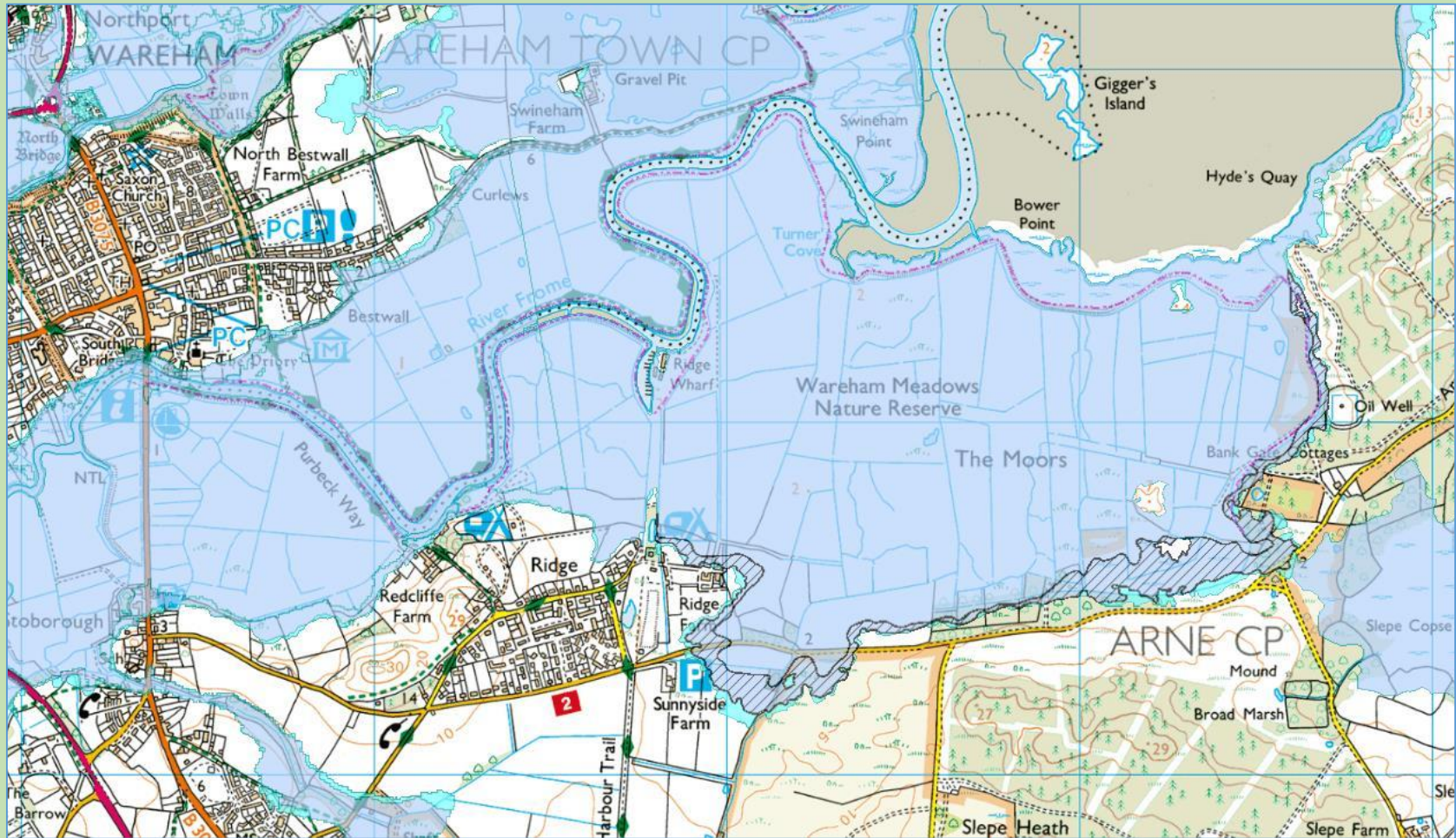


Flood Risk (Freshwater) Update

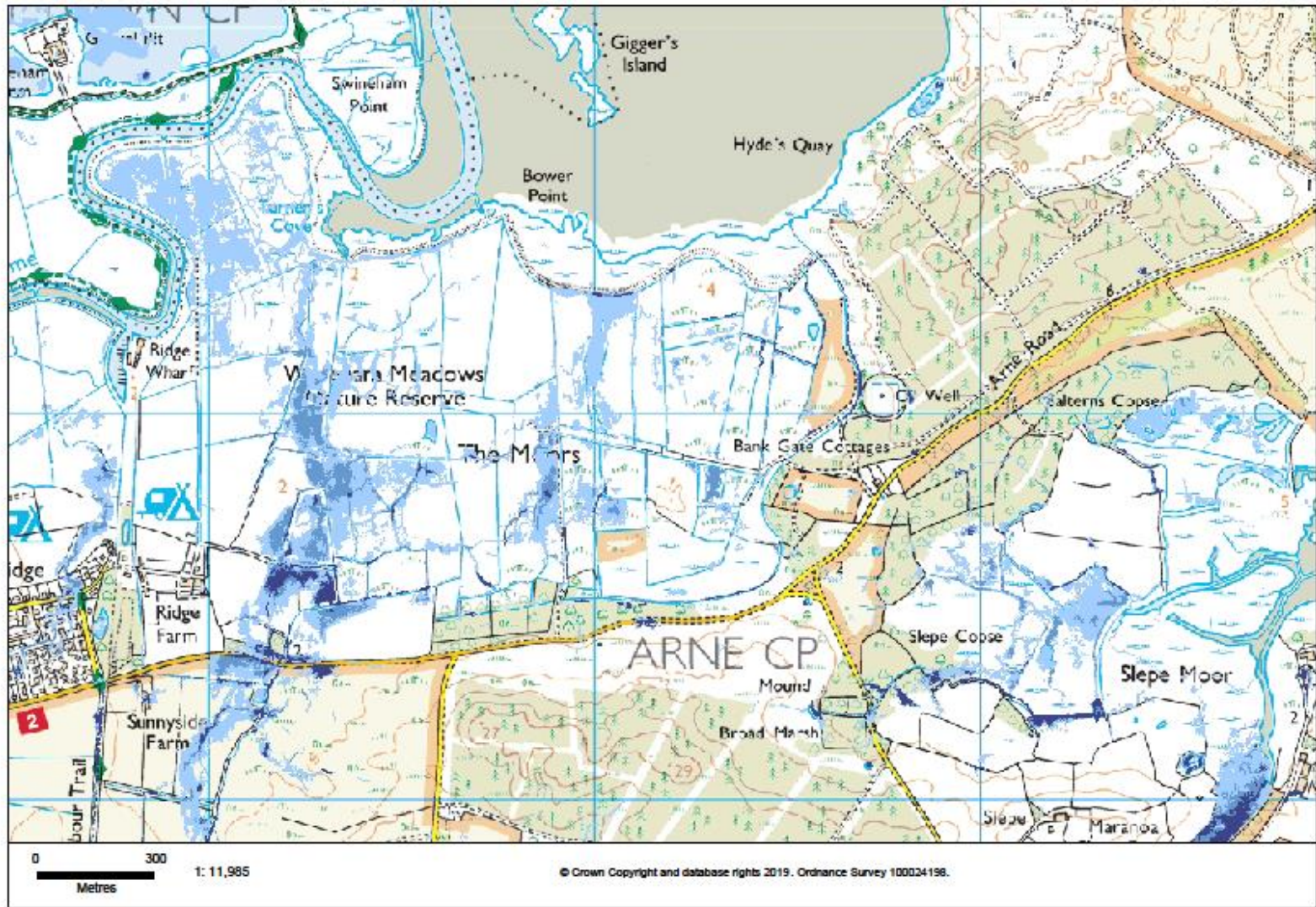
Freshwater modelling – outline outputs



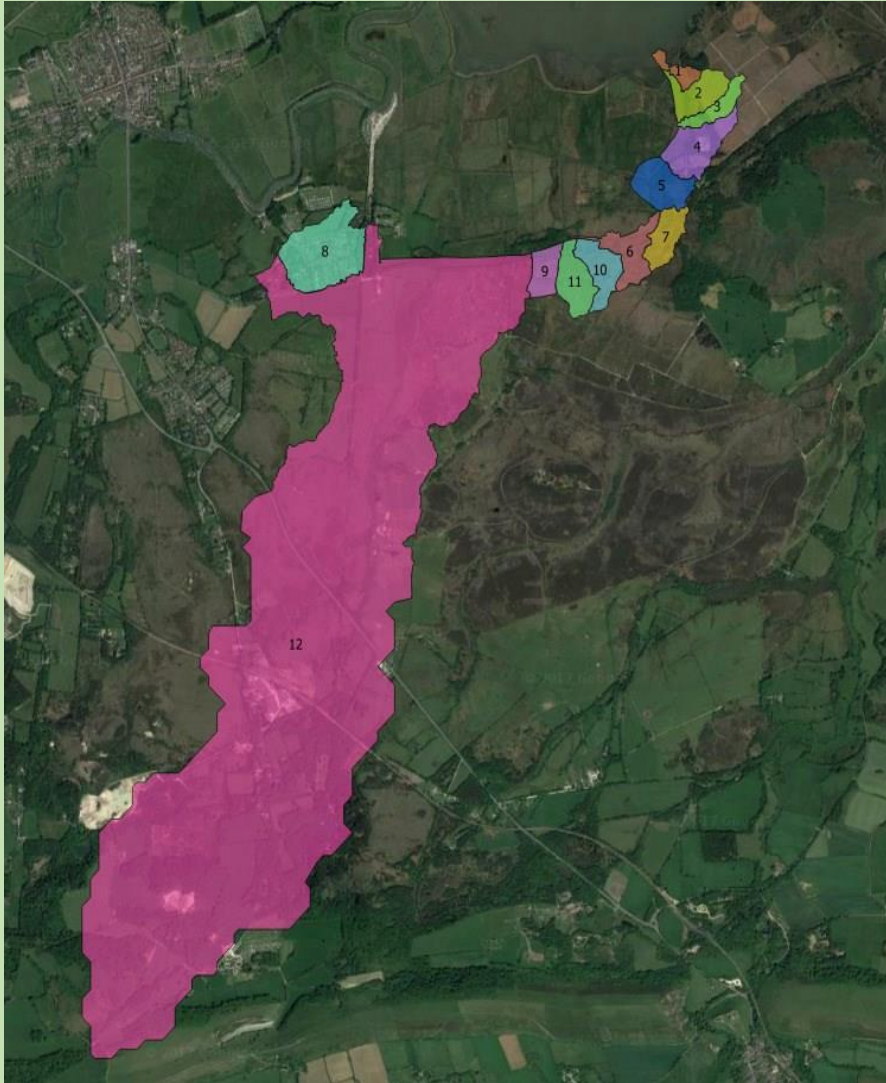
Existing floodplain – Tidal & River Frome



Existing flood risk – Surface Water

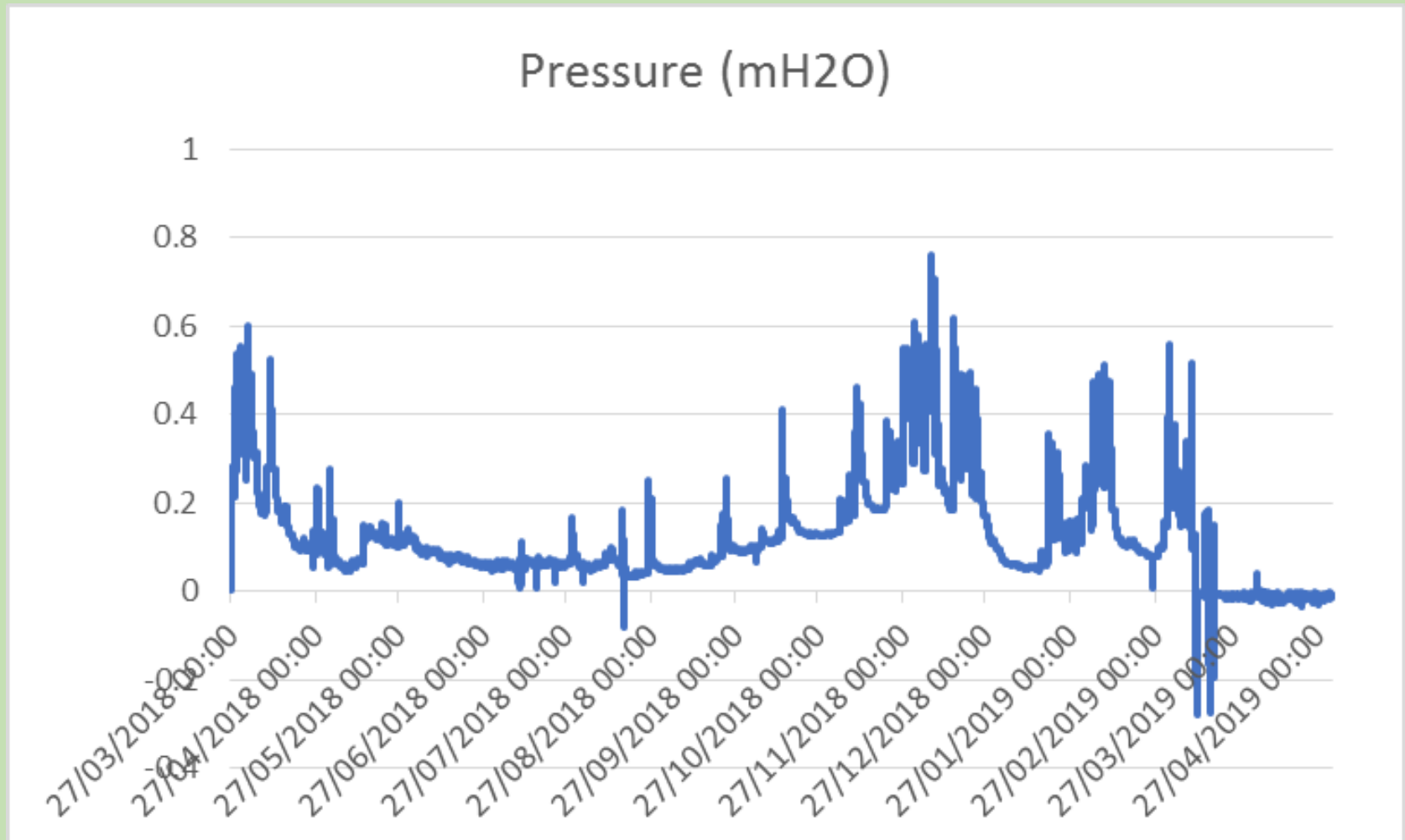


Freshwater catchments



Catchment:	8+12	1-7, 9-11
AEP	Peak flow (m ³ /s)	Peak flow (m ³ /s)
50%	0.9	0.1
20%	1.2	0.2
10%	1.5	0.2
5%	1.7	0.2
2%	2.1	0.3
1%	2.4	0.3
0.1%	3.8	0.5

Furzebrook level gauge



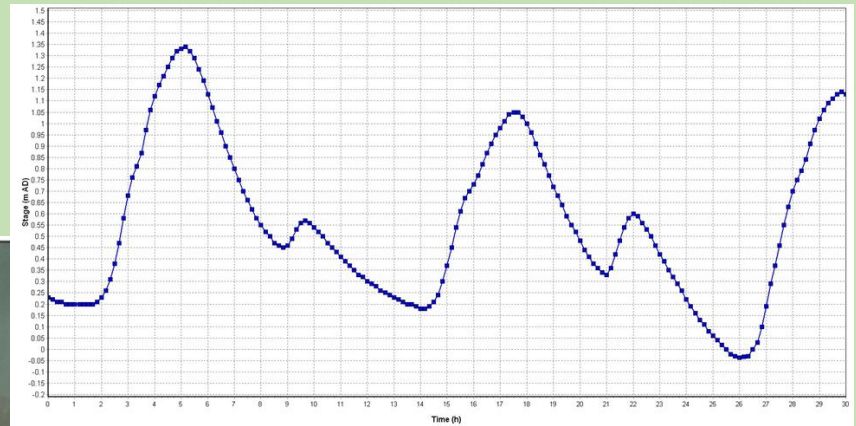
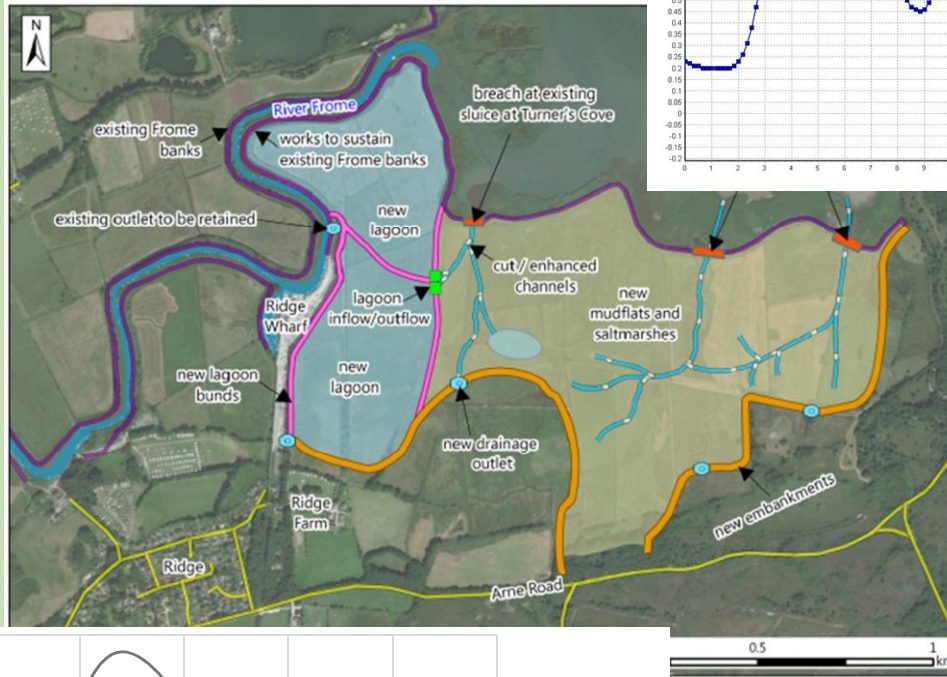
Freshwater modelling

Defra, 2005. *Joint Probability: Dependence Mapping and Best Practice*.
R&D Technical Report FD2308/TR1

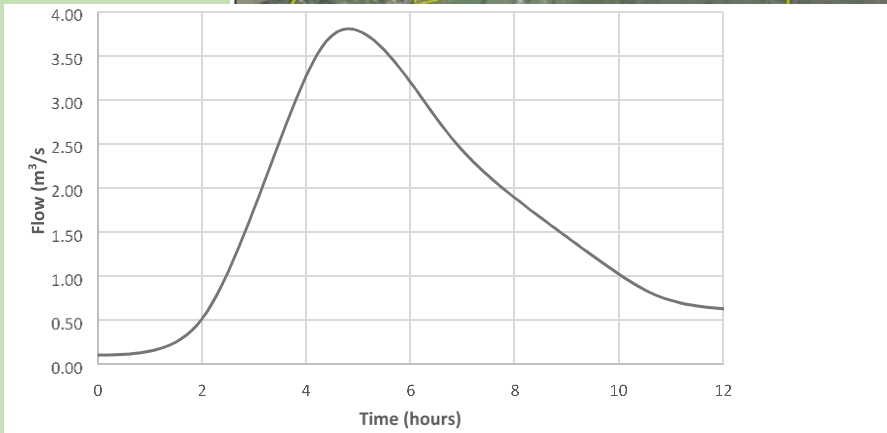
Scenario	Time Frame	Geometry	Tidal Boundary	Fluvial Inflows
Present day 50% AEP baseline	Present day	As existing	0.5% AEP (1 in 200year)	QMED - 50% AEP (1 in 2-year)
Present day 20% AEP baseline	Present day	As existing	HAT	20% AEP (1 in 5-year)
Present day 5% AEP baseline	Present day	As existing	HAT	5% AEP (1 in 20-year)
Present day 1% AEP baseline	Present day	As existing	HAT	1% AEP (1 in 100-year)
Present day 0.1% AEP baseline	Present day	As existing	HAT	0.1% AEP (1 in 1,000-year)
Present day 50% AEP with-scheme	Present day	Proposed scheme	0.5% AEP (1 in 200year)	QMED - 50% AEP (1 in 2-year)
Present day 20% AEP with-scheme	Present day	Proposed scheme	HAT	20% AEP (1 in 5-year)
Present day 5% AEP with-scheme	Present day	Proposed scheme	HAT	5% AEP (1 in 20-year)
Present day 1% AEP with-scheme	Present day	Proposed scheme	HAT	1% AEP (1 in 100-year)
Present day 0.1% AEP with-scheme	Present day	Proposed scheme	HAT	0.1% AEP (in 1,000-year)

Scenario	Time Frame	Geometry	Tidal Boundary	Fluvial Inflows
Future (2125) 50% AEP baseline	2125	As existing	0.5% AEP (1 in 200year) + sea level rise	QMED - 50% AEP (1 in 2-year) with 40% increase in flow
Future (2125) 20% AEP baseline	2125	As existing	HAT + sea level rise	20% AEP (1 in 5-year) with 40% increase in flow
Future (2125) 5% AEP baseline	2125	As existing	HAT + sea level rise	5% AEP (1 in 20-year) with 40% increase in flow
Future (2125) 1% AEP baseline	2125	As existing	HAT + sea level rise	1% AEP (1 in 100-year) with 40% increase in flow
Future (2125) 50% AEP withscheme	2125	Proposed scheme	0.5% AEP (1 in 200year) + sea level rise	QMED - 50% AEP (1 in 2-year) with 40% increase in flow
Future (2125) 20% AEP withscheme	2125	Proposed scheme	HAT + sea level rise	20% AEP (1 in 5-year) with 40% increase in flow
Future (2125) 5% AEP with-scheme	2125	Proposed scheme	HAT + sea level rise	5% AEP (1 in 20-year) with 40% increase in flow
Future (2125) 1% AEP with-scheme	2125	Proposed scheme	HAT + sea level rise	1% AEP (1 in 100-year) with 40% increase in flow

Input data - type

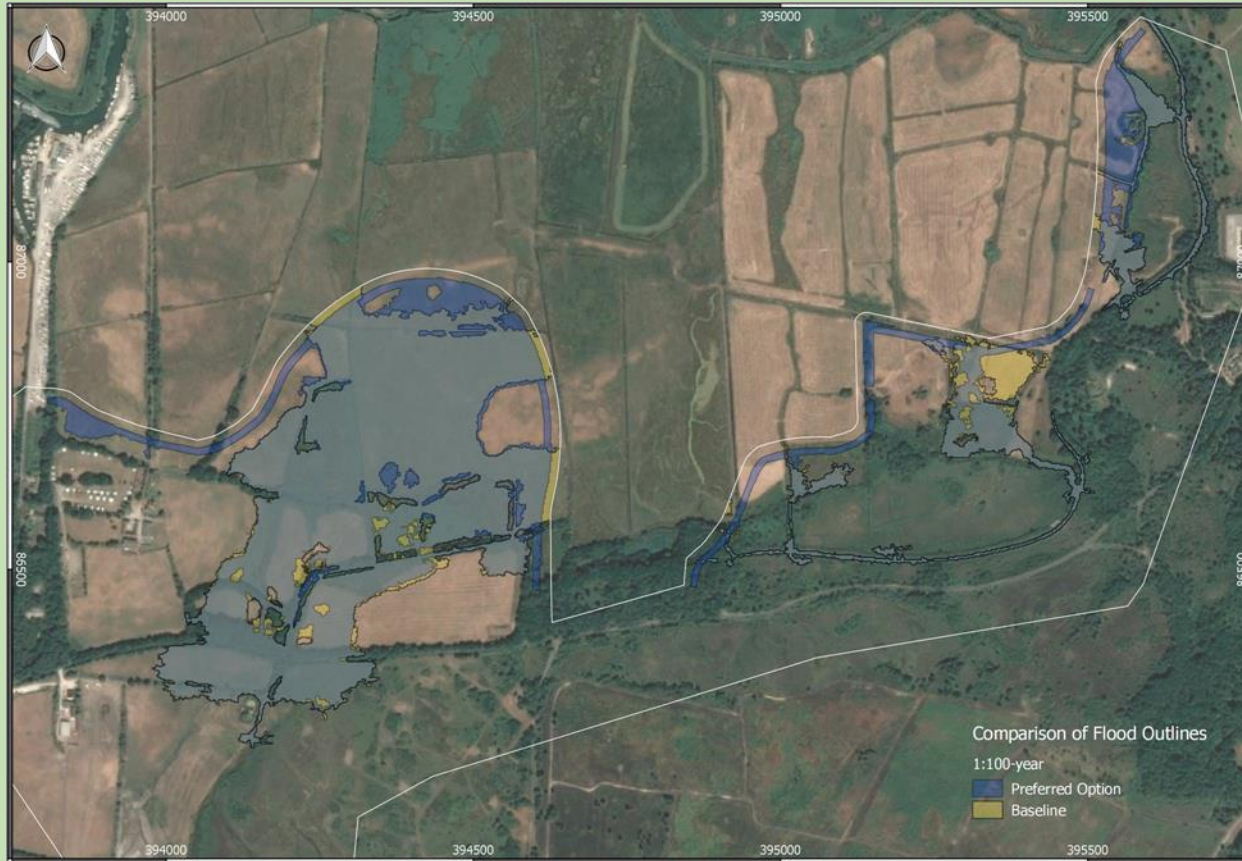


Tide



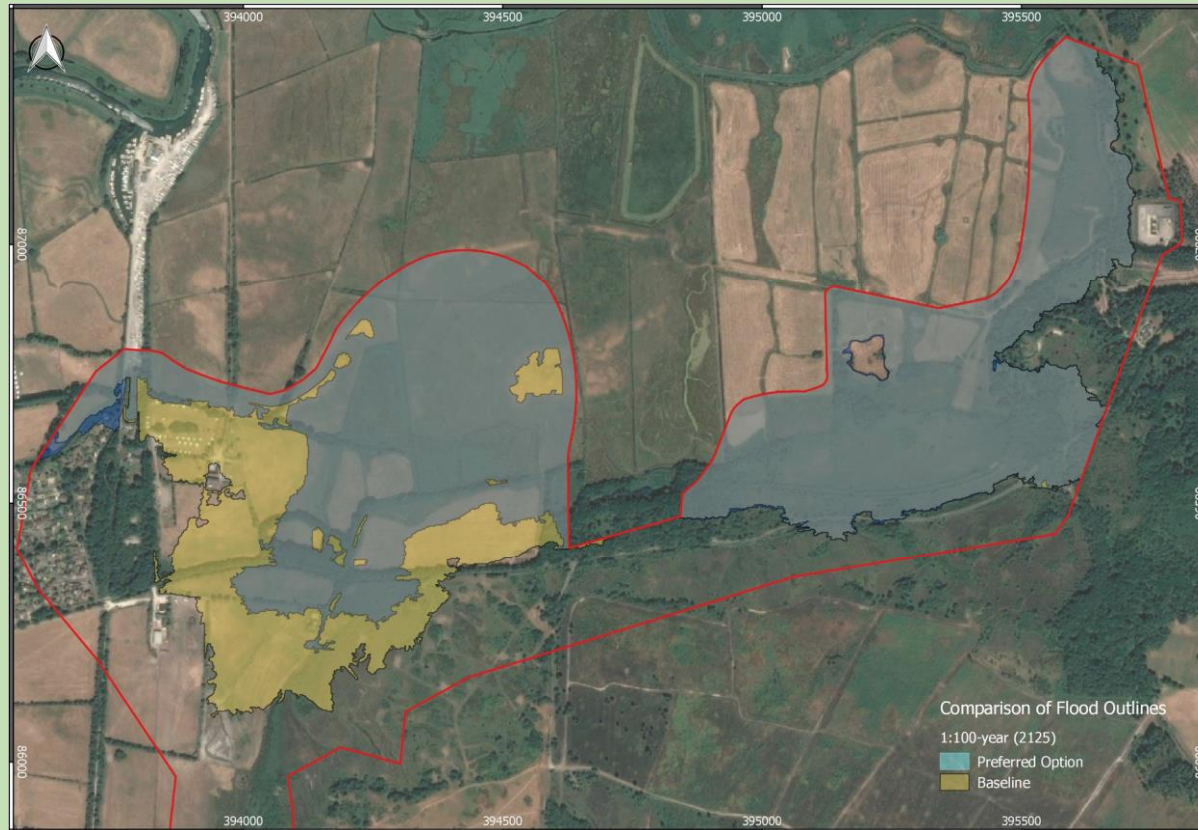
Furzebrook

Output data – present day



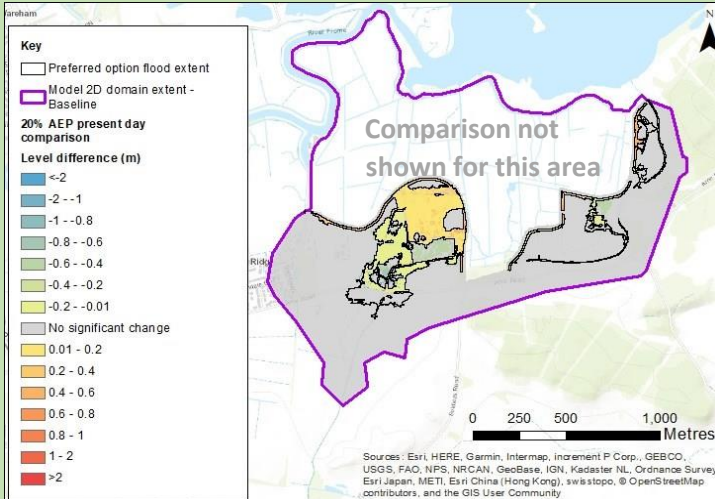
Comparison of 1% AEP fluvial flood outlines for the **present day** (area west of causeway not shown as area not flooded in this scenario)

Output data - future

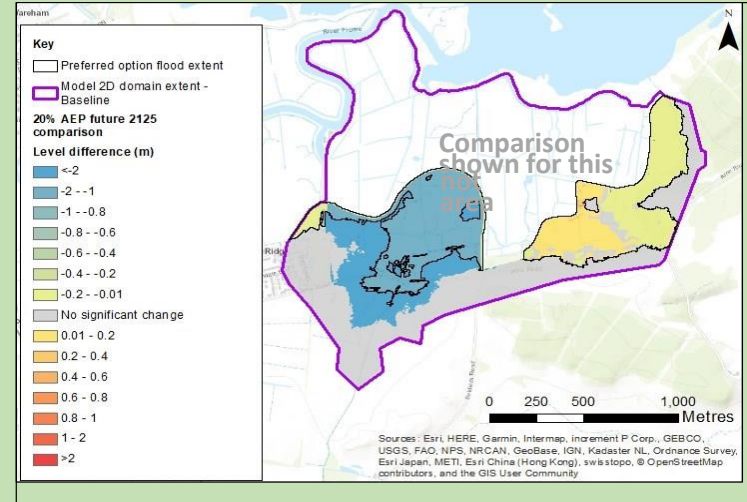


Comparison of 1% AEP flood outlines for the year **2125**

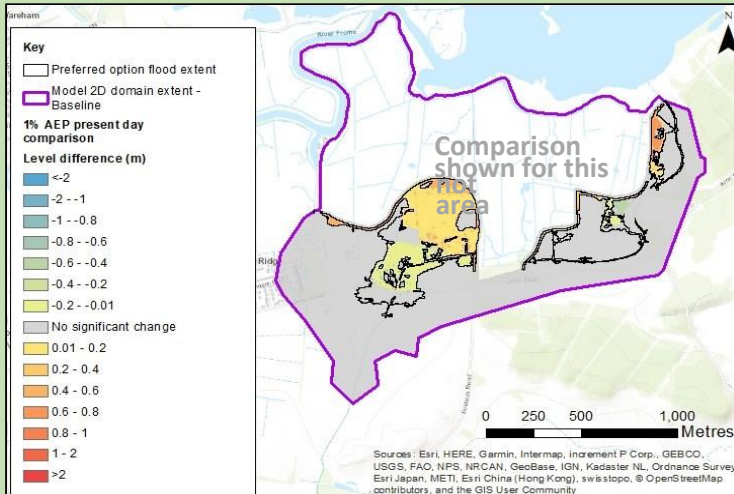
Outline Results



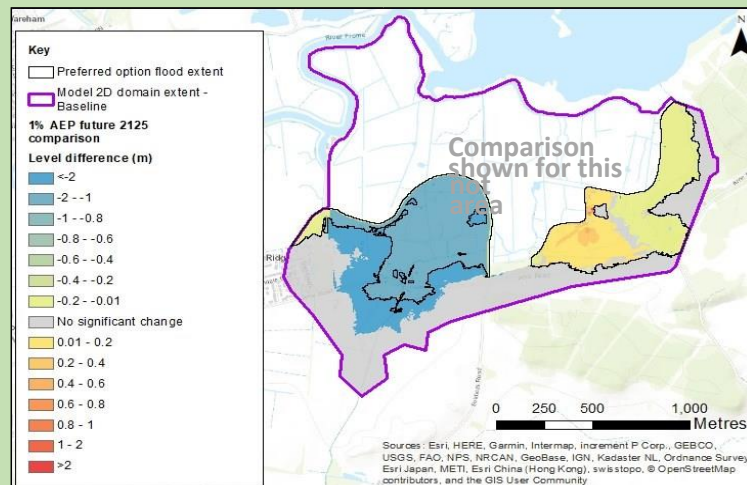
Comparison of flood level between baseline and with-scheme scenarios behind realigned embankments for the present day 20% AEP fluvial event



Comparison of flood level between baseline and with-scheme scenarios behind realigned embankments for the future (2125) 20% AEP fluvial event

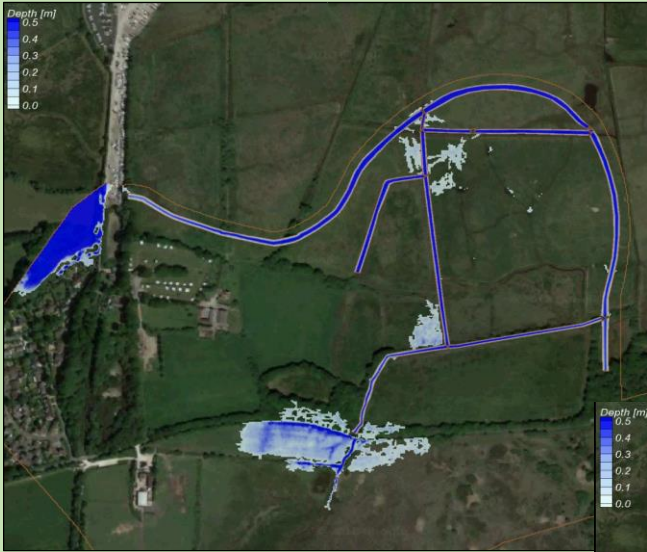


Comparison of flood level between baseline and with-scheme scenarios behind realigned embankments for the present day 1% AEP fluvial event



Comparison of flood level between baseline and with-scheme scenarios behind realigned embankments for the future (2125) 1% AEP fluvial event

Furzebrook tide locking scenario



Depth of flooding in present day QMED (with 1 in 200-year tide) event at **5 hours** into model run

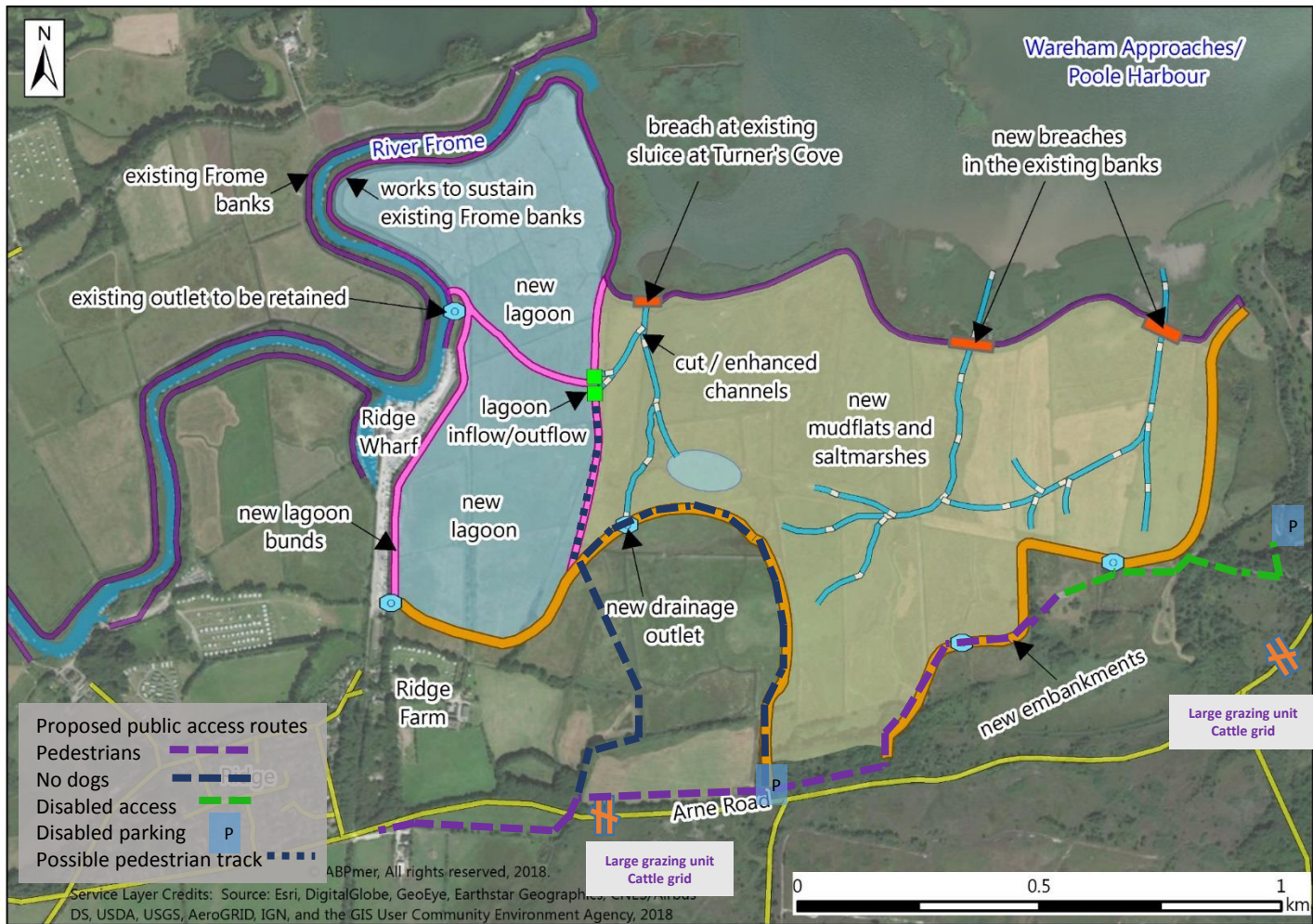


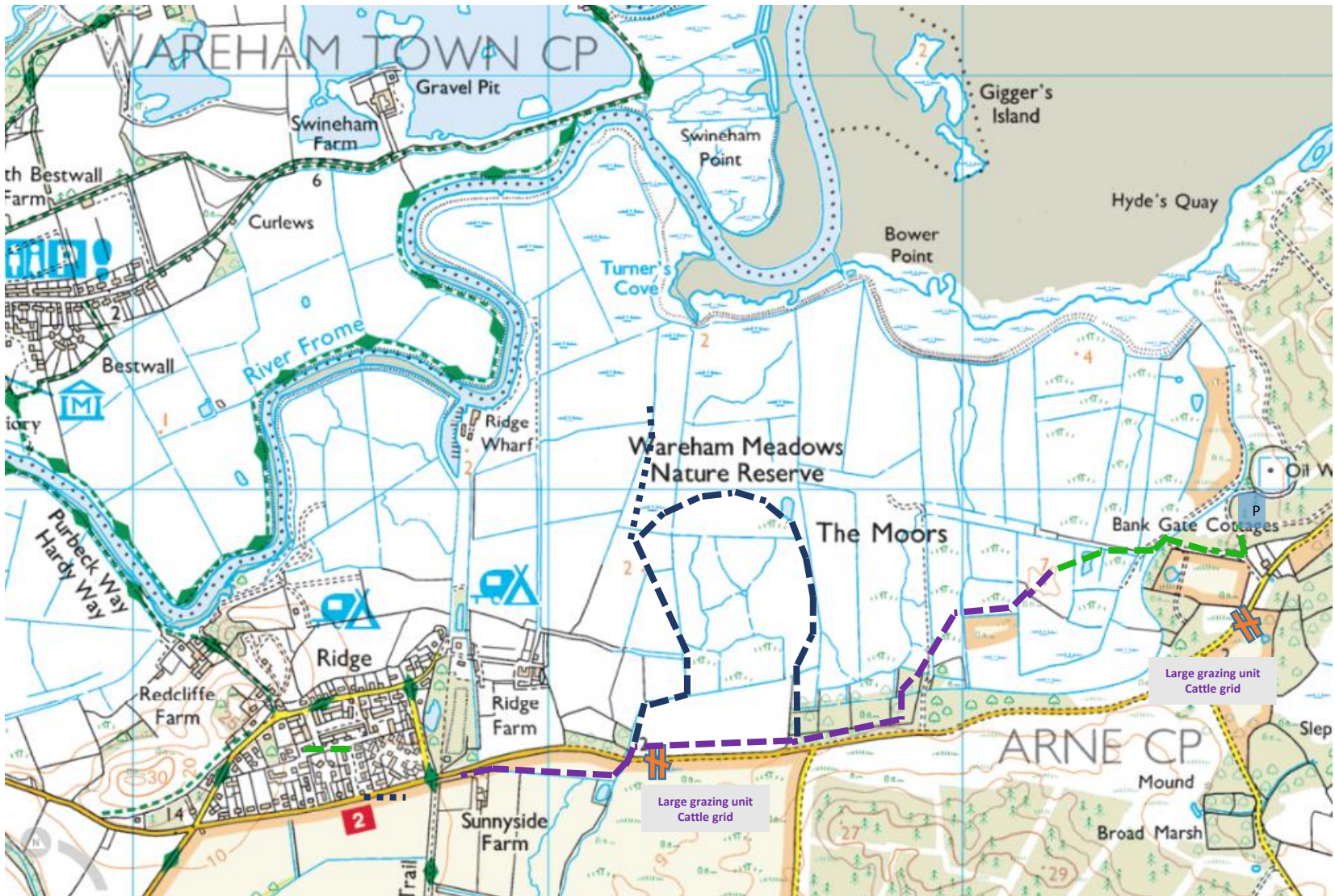
Depth of flooding in present day QMED (with 1 in 200-year tide) event at **24.25 hours** into model run



Depth of flooding in present day QMED (with 1 in 200-year tide) event at **27 hours** into model run

Update on Visitor Access

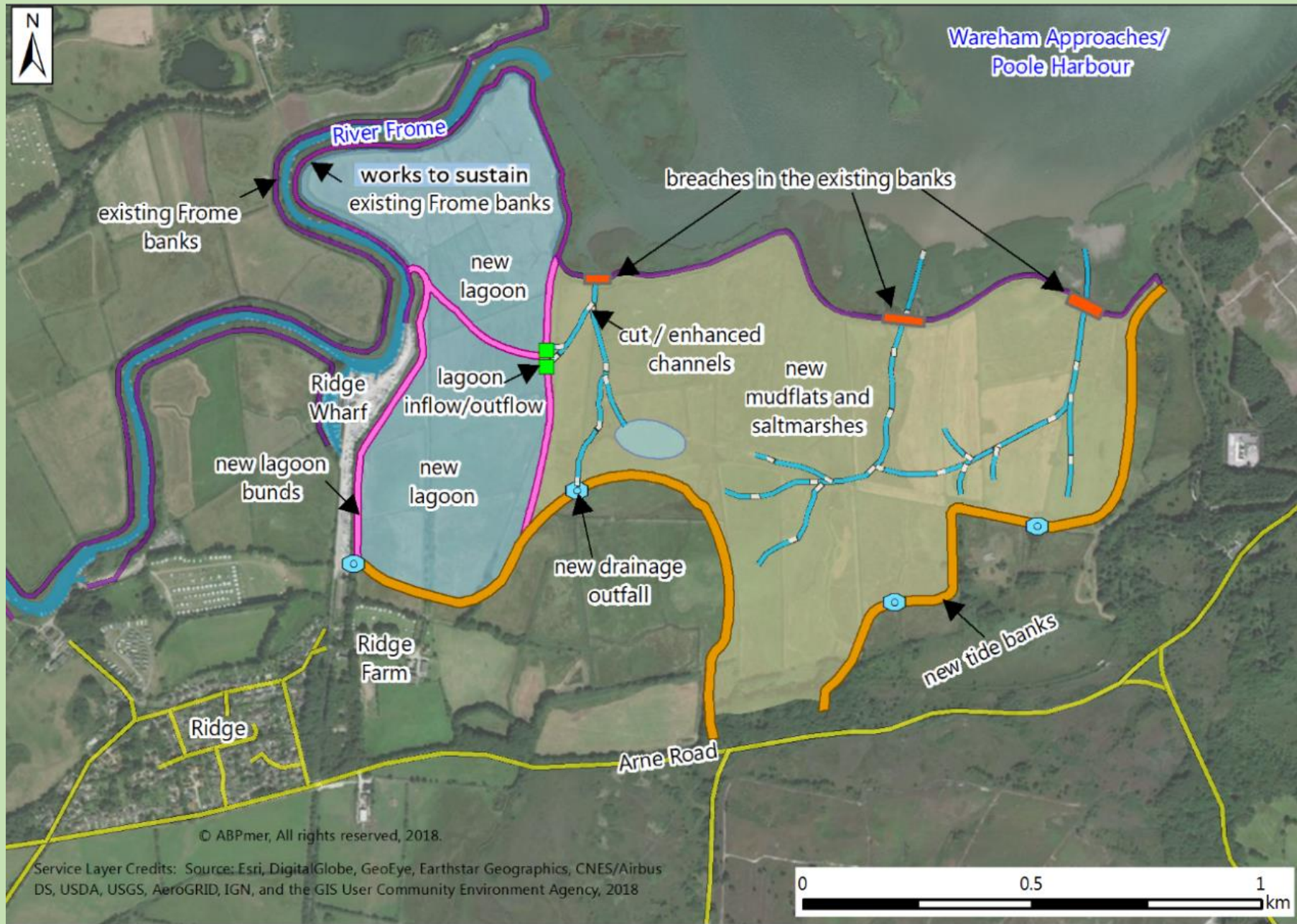




Open
Forum

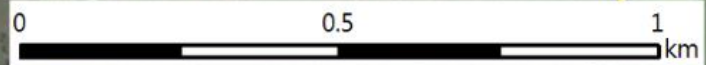


Wareham Approaches/ Poole Harbour



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Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community Environment Agency, 2018



Next Steps

- Ecology assessments
- Review responses from Dorset Council
- Commencement of detailed design by Atkins

Stakeholder Liaison Group

- Thank You

The Moors at Arne Project

