



Development and Regeneration Technical Services (DARTS) Framework

Further Competition Invitation to Tender (Stage 3
Over FTS Threshold / Stage 1 Under FTS Threshold)

Newburn Riverside Flood Risk Modelling and Mitigation Strategy

Issue Date: 18/09/2023

ProContract Identification Number: DN669898



Introduction

The purpose of this Further Competition Invitation to Tender (ITT) is to award the call-off contract for the above commission.

We ask you to respond to the questions detailed in Part 2, Section 6 (Evaluation Criteria) using the Response Form and to return the Response Form and Resource and Pricing Schedule in Part 3 with your tender.

This Further Competition ITT is divided into 3 parts:

Part 1 – Commission Requirement

- Details the commission requirements.
- Details additional terms and conditions for the Further Competition. The successful Supplier will be subject to both the terms and conditions of this Further Competition and the Framework Contract. Unless otherwise defined in these instructions, terms used shall have the meaning given to them in the Framework Contract.

Part 2 – Instructions for Submitting a Response

- Contains important information and instructions on preparing and submitting a tender response. Please read these instructions carefully prior to submitting your tender response.
- Outlines the evaluation criteria which will be used for assessment. It is important that Suppliers familiarise themselves with the criteria and ensure they are considered when compiling their tender response.

Part 3 – Standard Forms

- Contains the standard forms required to be completed and returned by the Supplier when submitting a tender response.

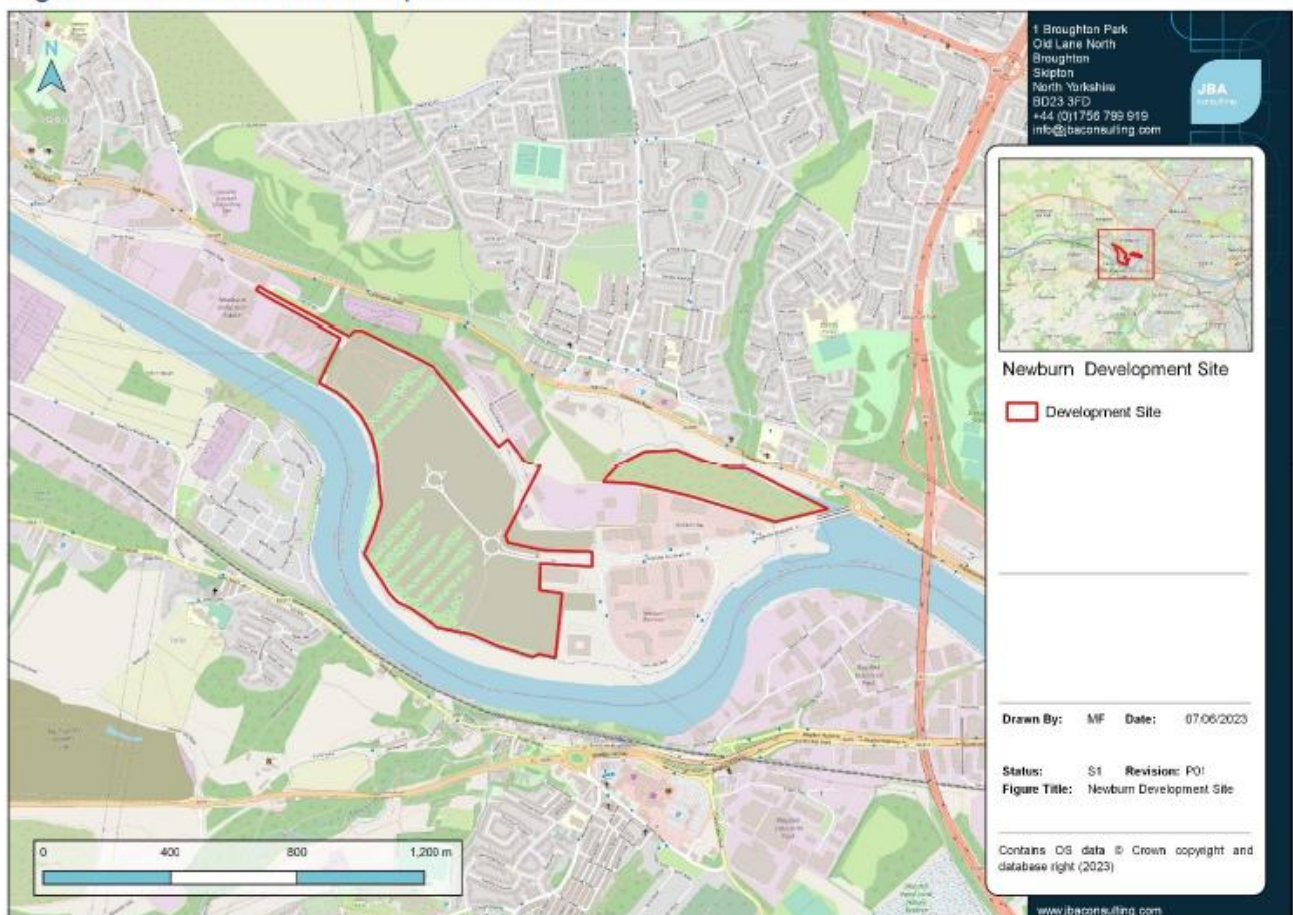
Part 1 - Commission Requirements

A PROJECT BRIEF

1. Commission background

Newburn Riverside lies approximately 4 miles west of Newcastle City Centre, near the villages of Newburn and Lemington, on the banks of the River Tyne (see Figure 1-1).

Figure 1-1: Newburn Development Site



Newburn Riverside comprises an established business park and a large 30ha vacant brownfield site. It was remediated in the 1990s to a specification to enable commercial development as the site was previously allocated for employment. Given the slow take up and high proportion of vacant office space the Council now wish this site to be brought forward for housing.

The site was acquired by Homes England in December 2014 and in January 2018, investment was approved to progress an outline planning application, associated de-risking works and holding costs to enable the delivery of a 1,000-unit scheme.

A multi-disciplinary team, led by WSP, were appointed in January 2019 to prepare, submit and manage a planning application for the Newburn Riverside site up to determination. This appointment led the team to develop a suite of documentation, including an Environmental Statement, to support a policy compliant outline planning application for up to 1,000 homes. Over the following 18 months, the number

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of homes proposed has changed several times to reflect discussions with the Council. Given the high abnormal costs associated with developing this site, it is crucial that numbers do not fall below the 900 dwellings currently identified in the latest plans.

In February 2022, a requirement for significant tidal and fluvial flood level modelling was raised by the Local Lead Flood Authority (LLFA). Whilst this level of modelling is very unusual for a site which sits in Flood Zone 1, downstream of the site recent and unpublished modelling work has taken place on the River Tyne at MetroGreen and this has concluded that in some climate change scenarios and wave actions the risk of flooding in this area could increase.

Over the second half of 2022, consultants WSP produced a tidal model of a section of the River Tyne which covered the site. This work (discussed further below) was submitted to the LLFA as part of the planning application process who in turn consulted with the Environment Agency (EA). The EA responded asking for additional modelling work (a fluvial model of the River Tyne looking at climate change), analysis of the stability of the river bank and quay wall as well as further analysis of potential mitigation and compensation. The LLFA in turn has asked for more detailed analysis of other sources of flood risk (surface water, ground water etc...) prior to developing a drainage strategy for the proposed scheme

2. High level objectives

This commission seeks a consultant to complete the flood risk work package required to address the EA's concerns and those of the LLFA. As a minimum the work should establish:

- A package of modelling and technical information which satisfies the EA and LLFA requirements;
- An agreed Flood Design Level which can be used by the Homes England to set proposed ground levels and finish floor levels and progress with the site design work;
- A mitigation strategy sufficient to deliver the scheme to the EA's and LLFA's satisfaction. Where multiple options exist, these should be identified and explored in terms of costs and benefits. Possible mitigation to consider / develop is likely to include:
 - o Measures or features to compensate for ground level increases above the agreed flood level.
 - o Discussion and integration of the mitigation options with the proposed scheme masterplan.
 - o Flood barriers or walls to deflect wave actions.
 - o Routes for safe access and egress for residents and emergency vehicles.
 - o Others.
- Outline costings for the mitigation options considered and a recommendation option; and
- Groundwater monitoring at this site will also be required for groundwater flood risk assessment. If the ground investigation is required, the groundwater monitoring should be set up at the same time for efficiency.

The following section represents a detailed consultant brief of the technical requirements of this commission, prepared following a full review of the Environment Agency and LLFA's comments and requirements.

3. Existing Modelling

2022 Newburn model (WSP)

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A 2014 Tidal Skew Surge Joint Probability model of the River Tyne, which informed the Strategic Flood Risk Assessment in 2014/2015 was used as the basis for the model update by WSP. The model is a linked 1D-2D Flood Modeller-TUFLOW model. The tidal model updated by WSP will be referred to as the 2022 Newburn model throughout this report.

The 2014 model did not include representation of the left floodplain of the River Tyne and was therefore extended on the left bank to include the site and the floodplain immediately upstream of the site. The model was extended coarsely upstream of the site by using an existing model node as a proxy for river geometry, with no further survey data available.

Two versions of the 2022 Newburn model were run: a baseline version and a development hydraulic model which includes the ground within the site boundary raised by 10m. This was done to ensure the site does not flood and water levels adjacent to the site could be used to determine minimum ground levels required.

The tidal boundary conditions were updated to the latest set of sea level extremes determined by the EA in 2018.¹

The model was run for the 0.5% and 0.1% AEP Annual Exceedance Probability (AEP) events. The Higher Central, Upper End, and H++ (credible maximum) climate change scenarios were run. The model showed that the site is at tidal flood risk with the Upper End Climate Change and H++ scenarios. No fluvial flood risk assessment was included in these model runs.

At the time of delivery by WSP, the understanding from national guidance was that flood risk at the site would need to be mitigated up to the Higher Central climate change scenario. However, the LLFA have since stated that because this site is classed as 'more vulnerable', their minimum benchmark for flood risk mitigation is the Upper End climate change scenario. Section 3 provides more detail on model run requirements.

Level-for-level compensation is required up to the Higher Central climate change event. Level-for-level compensation is where any loss in flood storage must be compensated by the reduction in level of nearby ground, so that the same volume is available at every flood level. The 2022 Newburn model did not show any flood risk at the site with the 0.5% AEP (tidal) and Higher Central climate change run.

Upstream models to be used for fluvial model update

A review of the 2022 Newburn model by the EA concluded that an assessment of fluvial flood risk is required. The existing model used the 50% AEP inflow as input to the hydraulic model. The model will be required to be extended upstream of the site and run with the 1% AEP event inflow to allow for assessment of fluvial flood risk. More detail on this is provided below.

Two models have been supplied by the EA which can be used for extending the model. These include:

- 2020 Bywell, Ovingham, and Prudhoe (BOP) Model; and
- 2008 River Tyne Model.

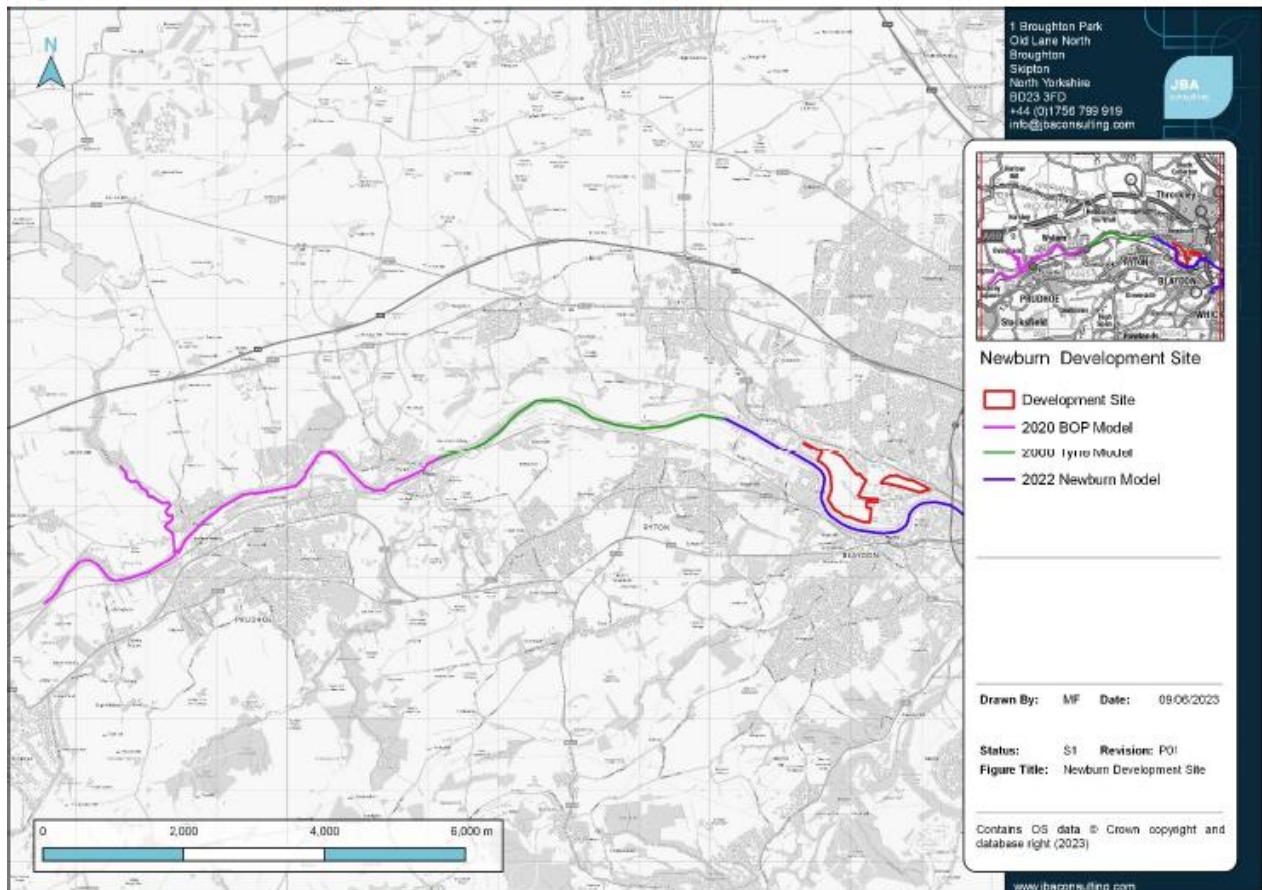
¹ Coastal flood boundary conditions for the UK: update 2018, User Guide, Environment Agency May 2019

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Upstream of model node 'TYN02_25580C', the 2022 Newburn model was extended to allow for propagation of the extreme tides. This was done coarsely by copying river geometry from 'TYN02_25580C' as no further survey data was available. This reach should be updated with model data from the 2008 River Tyne and 2020 BOP models.

The extents of the existing models which should be used in the model update are shown in Figure 1-2 below.

Figure 1-2: Models to be used in fluvial model extension



The EA informed Homes England in May 2023 that work is currently being undertaken to update modelling through Wylam and along the Newcastle Quayside.

4. Stakeholders

The work must be complete to the satisfaction of the EA and LLFA. The consultants should be aware of this and factor in sufficient time and resource for engagement with these parties and for the model / report review process that follows.

B CONSULTANT BRIEF

1. Budget

There is no budget or budget-range provided however please review the pricing section of this ITT for information about how to set out your proposed price.

2. Indicative Programme

These dates are indicative only to illustrate the period of the commission envisaged. Suppliers should note the indicative programme dates when preparing their Delivery Methodology in the Response Form. The milestones are taken from the Figure 3-1 below.

Key Delivery Milestones	Anticipated Date
Commencement Date	30 October
Assess whether existing hydrology is suitable for model update	1 week
Undertake hydrological analysis to derive fluvial inflows (if required)	2 weeks
Extend model upstream to Bywell	4 weeks
Address all EA review comments	1 week
Run model for fluviably dominant events and analysis	2 weeks
Joint Probability Analysis (if required)	2 weeks
Run model without high ground and results analysis	2 weeks
Ground Investigation specification and design (if required)	6 weeks
Undertake Ground Investigation (if required)	6 weeks
Ground Investigation Interpretation and Analysis (if required)	6 weeks
Optioneering for mitigation of offsite flood risk and level-for-level compensation (assume three options) and analysis (if required)	6 weeks
Sequential test (including groundwater analysis) flood risk assessment and reporting	4 weeks

3. The services and deliverables

Structural and Civil Engineering Services

1. Introduction

Consultants JBA Consulting (JBA) have prepared a process flow chart to summarise the steps required for this commission. This is provided at Figure 3-1 and replicated at Appendix 1. Section references are provided in brackets in bold to where required assessments are explained in more detail in this report.

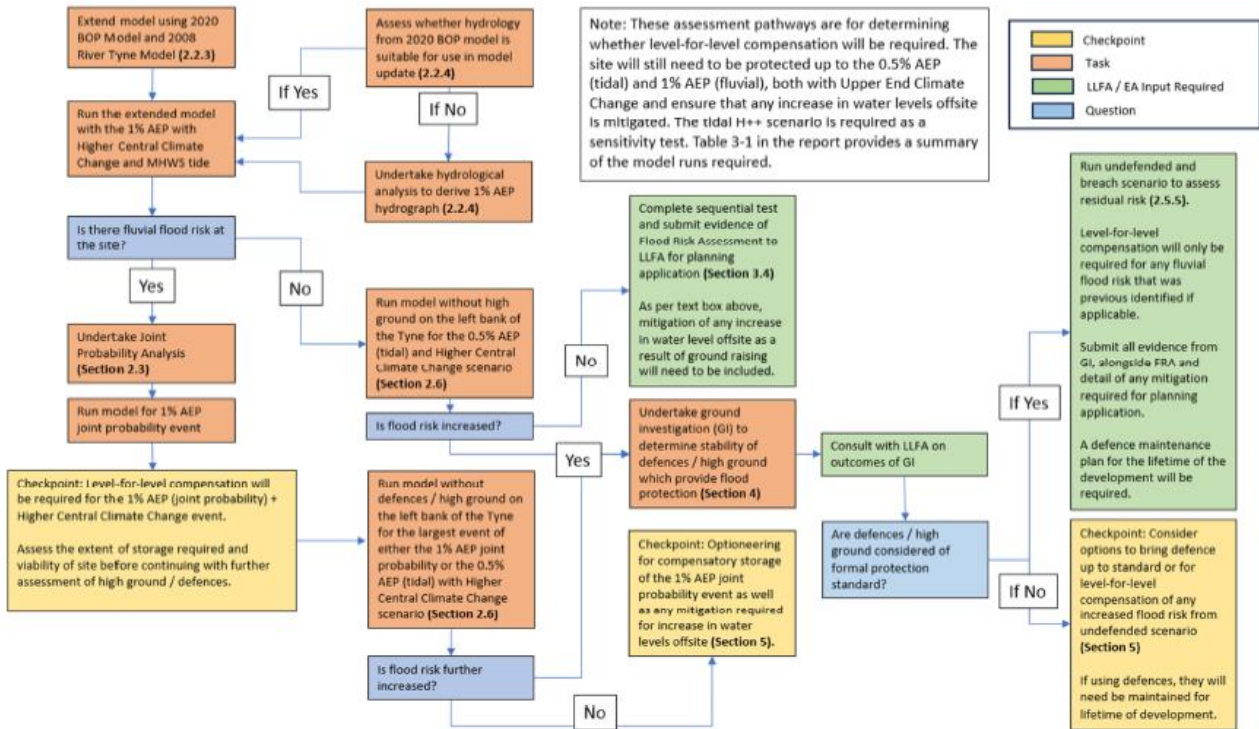


Figure 3-1 Anticipated Project Flow Chart including checkpoints, tasks and consultation points²

2. Model Update Requirements

The 2022 Newburn model was completed by WSP and issued to the EA and LLFA to review to support the Flood Risk Assessment (FRA) for Newburn Riverside in July 2022. A review was completed by the EA and it was concluded that additional work and analysis was required to use the model outputs with confidence in the FRA, most notably inclusion of a fluvial element and running an undefended scenario.

All comments raised by the EA and LLFA must be addressed before the planning application can be determined positively.

This chapter summarises the updates required to bring the 2022 Newburn model up to the EA’s recommended standard. There are some cases where the EA comment can be addressed with justification, rather than a need for additional analysis.

The existing 2022 Flood Modeller-TUFLOW Newburn model should be used as the basis of the model update, however the latest version of the software available should be used when completing updated model runs.

All modelling work completed should be in compliance with the Environment Agency’s Fluvial modelling standards³.

a. Fluvial Model Extension

The 2022 Newburn model applies a constant flow equivalent to the 50% AEP at each of the inflow boundaries for the tidal runs. This was done as there is an assumption that there is no fluvial flood risk at the site.

² The flow chart contains references to sections from another report. These references have been noted in this brief

³ LIT 56326 Fluvial modelling standards, Environment Agency, July 2022

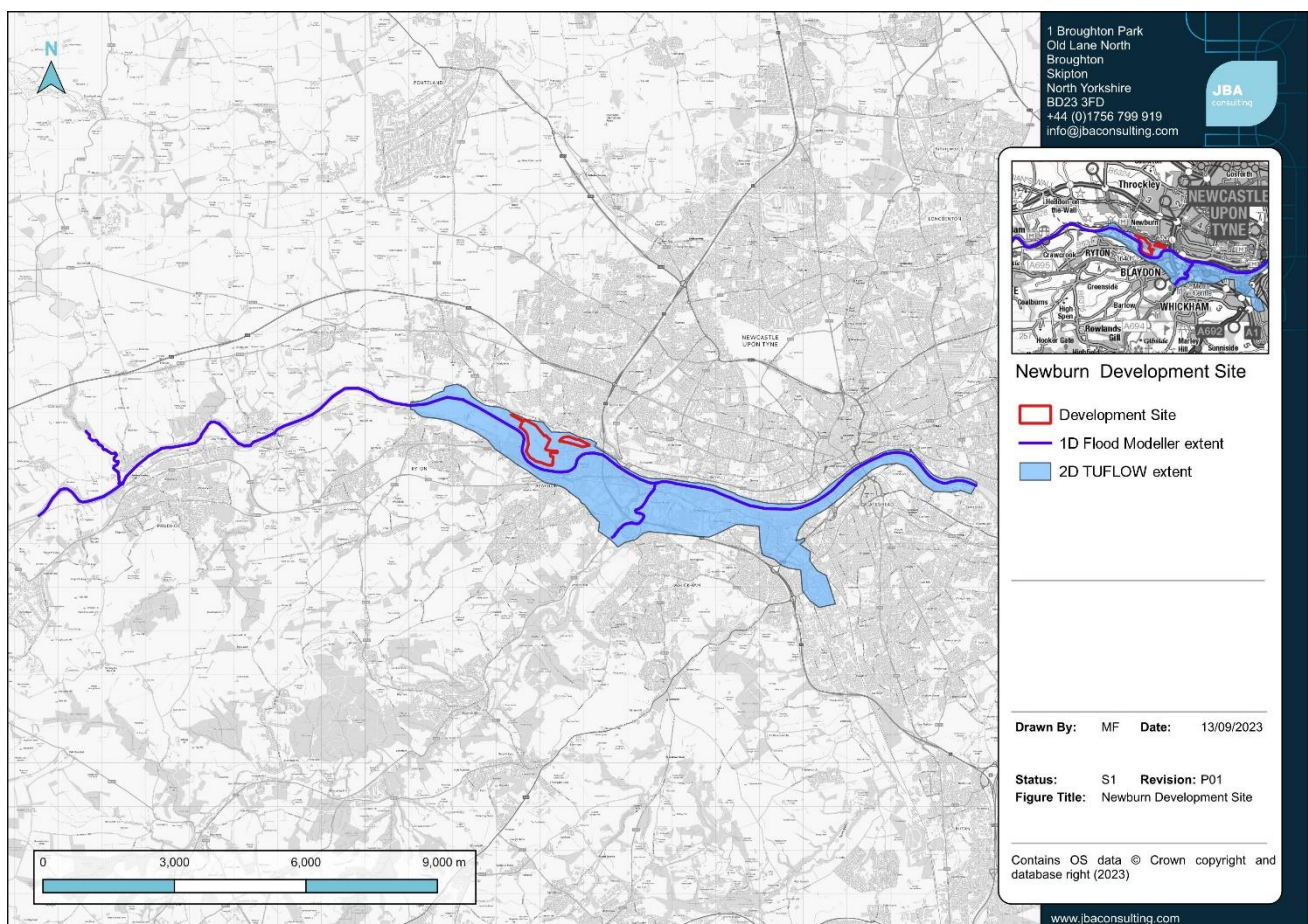
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There have been significant fluvial events on the Tyne since the Strategic Flood Risk Assessment (SFRA) was completed, including Storm Desmond in December 2015. The tidal influence extends to Wylam, however the Newburn site appears to be a transition zone from tidally to fluvially dominant. As this is a sensitive site with potential for 900+ homes, the Environment Agency has requested testing of fluvially dominant scenarios.

(Flow Chart REF 2.2.3) To complete this, the 1D Flood Modeller model should be extended upstream to Bywell, as there is a gauge on the River Tyne at this location. The 2020 BOP model should be used to update the model with data from the 2008 River Tyne model used to infill the reach between the end of the 2020 BOP model and the upstream extent of the 2022 Newburn model. The upstream boundary location will be located at Bywell (NZ 06554 62639) and the downstream boundary location will be retained from the 2020 Newburn model, downstream of Newcastle Upon Tyne at St. Peter's Basin (NZ 27916 63345).

The proposed model extents are shown in Figure 3-2 below. A review of the 2020 and 2008 models should be carried out to ensure they are representative of the current situation. If there are concerns over quality of survey data, particularly in the 2008 model, then spot survey or commission of new survey would be expected to update this reach of the model.

Figure 3-2: Newburn updated model extents



(Flow Chart REF 2.2.4) Hydrology was updated as part of the 2020 BOP modelling study, and therefore it is assumed this should still be valid. A review should be carried out to ensure that the latest data available and methods are used, as per the Environment Agency's Flood Estimation Guidelines.⁴ An assessment

⁴ LIT 11832 Flood Estimation Guidelines, Environment Agency, December 2022

should be carried out to determine whether any additional lateral inflows need to be derived to cover the study area. Climate change guidance will be followed to ensure the most recent allowances are used for both fluvial and tidal runs.

(Flow Chart REF 2.2.5) Evidence of this assessment of fluvial flood risk with relevant climate change allowances will need to be demonstrated in reporting. Section 3a below provides a summary of the model runs required. The MHWS should be used as the tidal boundary for fluvially dominant runs.

Freeboard assessments should include the fluvial flood risk if this is found to be more significant than the tidal flood risk.

b. (Flow Chart REF 2.3) Joint Probability

Joint probability between fluvial and tidal events has not previously been assessed for this reach as the assumption has been that fluvial flows are not significant for this reach of the Tyne.

The outcome of the fluvial runs, as detailed in the previous section will determine whether a joint probability assessment is required. If there is no fluvial flood risk, then it can be accepted that only tidal events cause flooding with no need for joint probability analysis.

If a joint probability assessment is required, Defra 2005 (FD2308) guidance for joint probability assessment should be used.

c. Tidal Boundaries

As per climate change guidance for settlements of significant urban extension, which the LLFA have defined the Newburn site as, it must be demonstrated that the site is protected from flooding up to the 0.5% AEP (tidally dominant) and Upper End climate change scenario. The H++ (credible maximum) scenario must also be assessed as a sensitivity test. WSP reviewed and updated the tidal boundary conditions as part of their assessment in July 2022. The boundary conditions were updated to be in line with the latest sea level extremes as per EA2018 guidance.

The EA review of the WSP model flagged that the H++ climate change scenario tidal level applied in the 2022 Newburn model is higher than the level that should be applied from climate change guidance as a result of the total sea level rise being extrapolated beyond 2100 to 2125.

The value should include the 2025 level (3.9mAOD), plus the total sea level rise to 2100 (1.9m), and an additional 2mm per year from 2017 to 2125 (0.256m). Therefore, the 0.5% AEP H++ level should be 6.056mAOD. The model currently applies a level of 6.49mAOD which included an additional 0.434m for extrapolating the total sea level rise from 2100 to 2125. This would take a more conservative approach, however is not following guidance and should be updated for final model runs. This only impacts the H++ sensitivity test run.

d. High Ground Removal

The 2022 Newburn model uses LiDAR to derive ground levels on the floodplain surrounding the River Tyne. To inform levels on the left bank, the left bank level from surveyed cross-sections has been extracted and enforced in the model along the 1D/2D boundary between channel and floodplain.

As a result, the model includes high ground on the left bank of the River Tyne at the development site in the model. This high ground is not a designated flood risk asset. High ground is typically assumed not to change with time and its condition is not usually a consideration in mapping flood risk. For EA mapping

(ie. for production of Flood Zone maps), high ground is typically assumed to be present in both a defended and defences removed scenario.

In this case, the EA have awareness of the particular feature which flanks the Newburn Riverside and have requested that an assessment is carried out to determine if the high ground is relied on for flood protection.

If flood risk is increased without the high ground in the model, this flood risk would need to be mitigated up to the Upper End climate change scenario and loss of floodplain accounted for with level-for-level compensation up to the Higher Central climate change scenario.

This is because the EA have stated that this high ground should not be relied on for flood protection, unless a full asset inspection and ground investigation (see Section 4 for more detail) demonstrated a suitable standard of protection. Detailed drawings would be required to evidence that the high ground is at an expected standard to defend the development and a plan would be required to assure that it would be maintained for the lifetime of the development. If the high ground is of suitable flood defence standard, then undefended and breach scenarios would still be required, but as a sensitivity test to assess residual flood risk.

Before undertaking any ground investigation, the model should first be run without the high ground enforced. This can be done by smoothing out the left bank to apply the landward level of the defence. If it is found that this does not increase the flood risk, then a ground investigation would not be required and the model without the high ground in place should be carried forward for all assessment. When undertaking this assessment, a check should be carried out to ensure the latest available LiDAR dataset is being used to represent the 2D domain. LiDAR data is available from the DEFRA data platform⁵.

e. (Flow Chart REF 2.6) Minor Model Build Updates

Additionally, there were two minor model update comments from the EA that should be addressed but are not expected to significantly impact results:

- Panel markers should be used in the model to improve conveyance at model nodes TYN02_21996, TYN02_21006, TYN01_19264, TYN01_18636, TYN01_16977, TYN01_15420, and TYN01_15019.
- The same roughness values were used on the left bank as on the right bank in the existing model. These should be reviewed to determine if still appropriate by consulting photographs. The method for estimating roughness values should be stated in the report.

3. Model Run and Deliverable Requirements

Several runs are required to provide evidence for the planning application. This section summarises runs and supporting documentation that are required to complete the modelling assessment phase of this study.

Climate change uplifts should be based on latest UKCP18 climate change guidance for the Tyne Management catchment⁶.

⁵ <https://environment.data.gov.uk/DefraDataDownload/?Mode=survey>

⁶ [Flood risk assessments: climate change allowances - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/612422/Flood_risk_assessments_climate_change_allowances_-_GOV.UK.pdf)

a. Model Runs and Purpose

In the case of more vulnerable new settlements or significant urban extensions, which the LLFA have stated this development should be considered as, the development must be designed to be safe and not increase flood risk offsite for the 0.5% AEP (tidal) event with Upper End climate change scenario and the 1% AEP (fluvial) with Upper End Climate Change allowance.

The Higher Central Climate Change allowance should be used for assessing level-for-level compensation requirements. The 2022 Newburn model results have shown that the site is not at risk with the Higher Central estimate, and therefore floodplain compensation would not be required at the site unless the fluvially dominant run or the runs with the high ground removed show flooding at the site.

The 0.5% AEP (tidally dominant) with H++ (Credible Maximum) sea level rise scenario is required as a sensitivity test. This sensitivity test is to be included in the FRA to assess how sensitive the development site is to changes in the climate for a high impact climate change scenario. Allowances for offshore wind and extreme wave height, and an additional 2mm/year from 2017 to 2125 should be included to account for storm surge. Wave generation has been accounted for in the 2022 Newburn model with a maximum fetch length of 1875m. Analysis of wave generation previously showed a maximum wave height of up to 0.7m, however this should be checked when all model updates are complete. A commentary on how the site can be adapted to large-scale climate change over the development lifetime should be included.

Table 3-1 provides a summary of the required model runs.

Model testing is required to determine whether the high ground along the left bank of the River Tyne at Newburn contributes to flood risk protection. EA guidance is that the site must not rely on the high ground for protection, unless it can be demonstrated through ground investigation that the ground is of a suitable EA defence standard. Therefore, the high ground should be removed from the model to assess the impact. If the removal increases flood risk, then either this scenario would need to be considered as the baseline or work would need to be completed to investigate the standard of the high ground.

If high ground is relied on for flood defence and is found to be / brought up to EA standard, then undefended and breach scenarios will be required to assess residual risk. Breach scenarios would need to follow guidance from the Environment Agency's Breach of defence guidance⁷. For undefended runs, any defences, including high ground which are found to be protecting the site would need to be removed.

⁷ LIT 56413 Breach of defences guidance, Environment Agency, June 2021

Table 3-1: Summary of required model runs

Run #	Description	Purpose	Justification
1	1% AEP + Upper End Climate Change (fluvially dominated) with MHWS tide.	To determine whether there is fluvial flood risk at the site. The site must be protected up to this event. Any increase in water levels offsite must be mitigated.	LLFA guidance that the minimum benchmark for flood risk mitigation for a more vulnerable development is the Upper End climate change allowance for the development lifetime ² . The 1% AEP fluvial event is considered the 'design flood' in National Planning Policy Framework (NPPF) guidance ³ .
2	0.5% AEP and Upper End climate change scenario (tidally dominated) with 50% AEP fluvial event.	The site must be protected up to this event. Any increase in water levels offsite will need to be mitigated.	LLFA guidance that the minimum benchmark for flood risk mitigation for a more vulnerable development is the Upper End climate change allowance for the development lifetime. The 0.5% AEP tidal event is considered the 'design flood' in National Planning Policy Framework (NPPF) guidance.
3	1% AEP Joint Probability Event + Upper End Climate Change	Only required if fluvial flood risk is shown in Run #1. The site must be protected up to this event. Any increase in water levels offsite must be mitigated.	EA Requirement for joint probability assessment. LLFA guidance on minimum benchmark for flood risk mitigation as per above.

² Policy and Climate Change Technical Note, WSP Ltd, September 2022

³ Flood Risk And Coastal Change <https://www.gov.uk/guidance/flood-risk-and-coastal-change>

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Run #	Description	Purpose	Justification
4	1% AEP Joint Probability Event + Higher Central Climate Change.	<p>Only required if fluvial flood risk is shown in Run #1.</p> <p>Level-for-level compensation for any on-site flooding is required up to this event.</p>	<p>EA Requirement for joint probability assessment.</p> <p>Floodplain storage compensation as set out in NPPF guidance for FRAs⁴. Guidance states Higher Central only required when the affected area contains essential infrastructure. The EA have stated that as the site is a significant development, the higher central allowance should be used.</p>
5	0.5% AEP and Higher Central Climate Change scenario (tidally dominated) with high ground along left bank lowered to the landward ground level.	<p>To determine whether flood risk is increased without the high ground on the left bank.</p> <p>Level-for-level compensation will be required for any flooding at the site in this scenario, unless the ground is found to be up to EA defence standard in ground investigation or work is completed to bring it up to standard.</p>	<p>As per above regarding floodplain compensation.</p> <p>The requirement to assess whether high ground protects the site from flood risk is an EA requirement following review of the 2022 Newburn model.</p>
6	1% AEP and Higher Central Climate Change scenario (fluvially dominated) with high ground along the left	<p>Only required if fluvial flood risk is shown in Run #1.</p> <p>As per above regarding level-for-level compensation.</p>	As per above.

⁴ Flood Risk Assessment Climate Change Allowances <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>

Run #	Description	Purpose	Justification
	bank lowered to the landward ground level.		
7	0.5% AEP and H++ scenario (tidally dominated) with 50% AEP fluvial event. Must include the extreme wave height allowance.	Sensitivity test	NPPF guidance for significant urban extensions which the LLFA have classified the Newburn development site as.
8	Undefended and Breach Scenarios	Sensitivity Test	EA requirement to assess these scenarios if the high ground is of suitable defence standard.

b. Sensitivity Testing

Sensitivity testing was previously carried out, however it was only tested with a $\pm 10\%$ change in Manning's n roughness values, whereas industry standard is $\pm 20\%$. Following the model updates, the roughness sensitivity test should be updated and documented. Changes to roughness values will be applied to both the 1D and 2D domain.

Downstream boundary sensitivity testing was completed for the tidal model runs but should also be carried out for the fluvially dominant runs by running the 50% AEP fluvial event with the H++ tidal scenario, as described for Run # 7 in **Error! Reference source not found..**

The EA have requested in their review that blockage should be considered at structures on the River Tyne. The recommendation of JBA Consulting is similar to that of WSP in that the structures along the River Tyne are significantly above the water level. The EA had commented that the piers and supporting foundations could be blocked, however the distance between piers on the structures is wide and therefore this would be unlikely. The structures mentioned as being a blockage risk are the HighLevel Bridge and Swing Bridge, which are approximately six kilometres downstream of the site. This justification for not running blockage scenarios should be supplied to the EA for consideration. JBA recommend that blockage scenarios are not included in the scope for this modelling.

c. (Flow Chart REF 3.4) Reporting and deliverable requirements

All model files, results, and check files should be delivered alongside a model log. A report should be issued which includes a description of the model update and results of the tidal, fluvial, and undefended scenario runs. This will be used as evidence in the planning application.

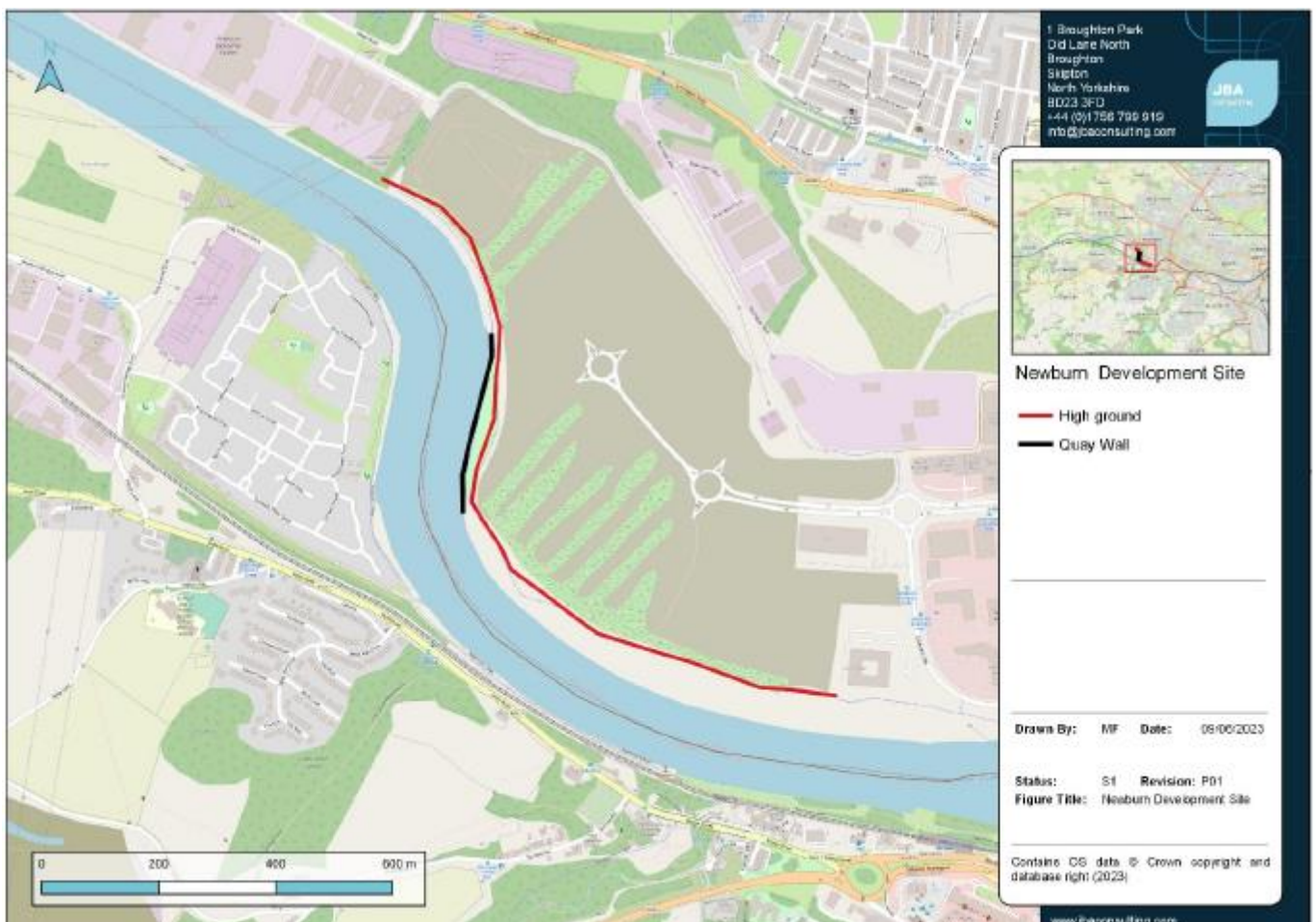
In addition, a sequential test will be required as the site is shown to be at risk from rivers and sea in the future and a sequential test has not already been done for the proposed site. This will need to be submitted with the planning application, and take in to account additional sources of flooding, including surface and groundwater. Homes England has agreed the scope of this test with the LPA and only three alternative sites will require assessment. Furthermore, Homes England has gathered information about them and has a non-technical assessment of their suitability and availability.

4. (Flow Chart REF 4) Ground Investigation Requirements

The EA have requested that a ground investigation be undertaken to determine the composition and stability of the high ground surrounding the site. This assessment of the geotechnical properties should only be required as part of the flood risk assessment if modelling results show that the site is at increased risk to flooding when the high ground is not included in the hydraulic model. If the high ground does not contribute to flood protection the ground investigation appears to serve no purpose. This approach is summarised in the flow chart at Figure 3-1 of this report.

This section summarises the proposed approach to ground investigation should modelling results indicate that the high ground contributes to preventing flooding at the site. This includes required assessment of the high ground and the quay wall on the left bank of the River Tyne (NZ 17682 64241) which runs in front of it. The approximate location of these features are shown in Figure 3-3. It should be noted that, the sheet pile quay wall which is fundamental to the stability of the bank and the high ground behind it an asset owned and maintained by the Port of Tyne and Newcastle Council.

Figure 3-3: Newburn High Ground and Quay Wall



a. Ground Investigation Methodology

No as-built information is available regarding the design or construction of the existing sheet pile quay wall. This means it is impossible to undertake any reliable analysis to determine its capacity or residual life at present. A comprehensive assessment of the current condition of the wall would require an

understanding of the condition of the sheet piles, the depth of embedment, the nature and capacity of the tie back system and any anchor blocks, the material properties of the retained soils, the material properties of the channel bed materials and an assessment of scour both at present and into the future. A ground investigation to determine many of these parameters is possible (see Section 4d); however, it is a costly, high-risk exercise.

Rather than seek to determine the condition of the existing wall, we propose an alternative approach to meet the EA's requirements. An analysis of the impact of failure of the sheet pile quay wall on the high ground behind it requires less geotechnical information than an assessment of the wall itself. If an assessment of the failure of the retaining wall indicates that the high ground can maintain an effective contribution to flood defence of the wider site for a period sufficient for remedial works to be completed it is reasonable to propose that the development could proceed if a design and clear plan to implement remedial works in the event of failure of the wall is in place. This intervention would likely comprise the placement of rip-rap on the bank, similar to that in adjacent sections of the riverbank. The initial investigation outlined in Section 4d considers the requirements for this approach.

The existing areas of higher ground outside the area protected by the quay wall are irregular and poorly defined. If modelling work determines that these areas of high ground perform a flood defence role JBA believe that a formal flood defence structure, probably a small embankment, will be required. The investigation outlined in herein would inform design of this flood defence.

b. Ground Investigation Standards

Ground Investigation works are to be carried out in general accordance with the ICE UK Specification for Ground Investigation Third Edition and the relevant British Standards (BS) or equivalent European Standards, in particular BS 5930 (2015) Code of Practice for Ground Investigations and BS EN 1997-2 (2007) Eurocode 7 Geotechnical Design, Part 2: Ground Investigation and Testing. All soil shall be logged in accordance with BS5930 (2015) and associated standards, rock shall be logged in accordance with the requirements of BS5930 (2015).

c. Utilities Requirements

A PAS128 Survey Type B service survey will be required at the location of all exploratory hole positions and for an area extending the full length of the sheet pile quay wall and inland to the full extent of the anchors. The survey is to be to quality level QL-B1P using detection method M3P. The survey will include an area of 5m square grid centred on the proposed ground investigation locations to allow for locations to be relocated should obstructions be encountered.

Alongside utilities the PAS128 Survey Type B is expected to identify the position of anchor tendons and other obstructions associated with the existing sheet pile quay wall.

d. Ground Investigation

The final extent and density of the ground investigation required may vary depending on the results of the modelling. For the quay wall area it is proposed to proceed with an initial phase of investigation which will enable an assessment of the impact of the failure of the wall. The second phase of investigation at the quay wall would only be undertaken if an assessment of the stability of the wall was required. For the area outside the quay wall the investigation would only be required if the modelling results indicate high ground in these areas contributes to the protection of the site.

All investigation work would need to take due regard of the potential presence of contamination in the ground.

e. Initial investigation

The aim of the initial investigation would be to determine the geological succession and material properties for the area behind the sheet pile wall, including the area of high ground.

The investigation is expected to comprise boreholes formed using a cable percussion rig or similar in the area behind the wall. The borehole records, in-situ testing and laboratory analysis of samples collected during the investigation would enable the development of a ground model and the determination of material parameters for the succession behind the wall. This information, combined with parameters derived from the hydraulic models would enable geotechnical modelling to investigate the likely geometry of the ground following failure of the sheet pile quay wall.

In addition to the ground investigation a bathymetric survey of the riverbed to identify the hard and soft bed level would be required.

f. Investigation of the existing sheet pile quay wall

If an assessment of the existing sheet pile wall is needed further investigation will be required. The investigation of this structure will be complex, costly and carries significant risks both in terms of achieving the investigations objectives and potentially causing damage to the structure. The proposed investigation below assumes that the initial investigation has been completed.

The condition of the existing piles could be determined by physically measuring the remaining steel thickness by drilling small holes and undertaking many ultrasonic thickness measurements. The piles themselves would be measured to determine the section type and identify their origin. These works would require access from the river by boat.

Determining the depth of embedment is essential and this challenging task should be completed by a specialist in geophysical investigation methods. One potential approach is to push a magnetometer mounted on a Cone Penetration Testing (CPT) rig down the rear of the piles at several locations to identify the extent of the magnetic anomaly resulting from the steel piles. If this was unsuccessful alternative geophysical approaches could be employed but these carry a risk that the data required may not be obtained.

Determining the nature and capacity of the tie back system requires identification of the type of anchors, their length and the nature of the anchor system. It is hoped that the Ground Penetrating Radar (GPR) survey that will be completed for the PAS128 survey (see Section 4c) will provide some indication of the position of the anchors but it is likely that excavation of an anchor bar will be required to assess its condition. The anchor system (if present) may be buried at significant depth below the mound located behind the wall so excavation and physical inspection may be impractical, even if the risks to the integrity of the anchor system itself can be managed. It is proposed that a specialist geophysical contractor would be required to obtain as much information as possible about the anchor system using remote sensing methods.

A geomorphological study to predict and quantify future erosion in front of the wall would also be required to inform the assessment of the pile wall.

The results of the investigation would be used to back calculate the residual life of the existing sheet pile quay wall. It must be understood that this investigation is likely to demonstrate that the wall has insufficient residual life to provide protection for the full design life of the development.

g. Investigation to inform the design of flood defences in areas outside the protection of the quay wall

The aim of the investigation in the area outside the area protected by the quay wall would be to determine the geological succession and material properties along the line of the high ground forming an informal flood defence to facilitate design of a formal flood defence in this area.

The investigation is expected to comprise boreholes formed using a window sampler or similar along the line of the existing cycleway. Trial pits to investigate the existing informal areas of high ground would also be required. The borehole and trial pit records, in situ testing and laboratory analysis of samples collected during the investigation would enable the development of a ground model and the determination of material parameters. This information, combined with parameters derived from the hydraulic models would enable the design of a formal flood defence in those areas where the hydraulic modelling indicates one is required.

Groundwater monitoring

The boreholes formed during the initial investigation provide an opportunity to undertake groundwater monitoring which will inform an assessment of the risk of groundwater flooding at the site. In particular these boreholes can provide information on the tidal response of groundwater in areas close to the riverbank.

A minimum of one borehole behind the quay wall and two along the existing cycleway should be installed with standpipe piezometers screened in permeable strata. The location of the screen will be determined on completion of each borehole. If multiple permeable horizons are present piezometers should be installed in additional boreholes to monitor each stratum of interest. The piezometers should be a minimum of 50mm in diameter and secured with lockable covers.

Identifying tidal responses in groundwater requires frequent monitoring intervals over multiple tidal cycles, ideally over a period of six months. This can be achieved using battery powered dataloggers (divers) installed in the boreholes recording levels at 15-minute intervals. The borehole headworks must be large enough to accommodate these installations.

One barologger will be required at the site to facilitate corrections for atmospheric pressure.

The river levels at the site are affected by both fluvial and tidal processes. The nearest river gauge to the site is at Bywell, therefore it would therefore be advisable to monitor river levels adjacent to the quay wall throughout the period of groundwater monitoring. This can be achieved, at least for the middle and upper part of the tidal cycle, by installing a perforated plastic tube containing a diver on the outside of the Quay wall.

h. Geotechnical Deliverables

The required deliverables from the geotechnical investigation would comprise:

- i. Ground Investigation specification
- ii. Factual Ground Investigation report (Contractor to deliver)
- iii. Groundwater monitoring records in electronic format (Microsoft Excel or similar)
- iii. Interpretive Ground Investigation Report (Designer to provide)
- iv. Design report presenting the results of the bank stability analysis following failure of the wall demonstrating that a remedial solution could be installed before the flood risk to the development increases
- v. A design report, including for construction drawings detailing the proposed mitigation to be installed in the event the wall fails.

5. (Flow Chart REF 5) Optioneering

Following the assessments detailed in the preceding sections, it will likely be necessary to consider design of options to mitigate flood risk offsite and/or for level-for-level compensation.

It is recommended that this is considered an additional phase of work as it will be difficult to define the scale of options required without first completing the earlier assessments.

As per the initial assessment completed by WSP, there are options for how ground raising can gain the required flood protection including raising the site to above the Upper End Climate change levels, raising and developing only part of the site or partial raising with formal defences.

6. Summary of Proposed Approach

The 2022 Newburn model will be extended upstream to Bywell using existing models to assess fluvially dominant events.

All outstanding comments from the Environment Agency review, as summarised in Section 2 will be addressed.

Joint Probability Analysis will be required if there is fluvial flood risk at the site with the 1% AEP event and Higher Central climate change event.

The updated model will be run without the high ground on the left bank of the River Tyne to assess whether this provides flood protection to the site.

If the high ground provides flood protection, a ground investigation will be undertaken to determine the stability of the quay wall and high ground which provide flood protection.

If the bank features are considered a suitable flood defence standard or work is undertaken to bring them up to standard, then a plan must be in place for these to be maintained for the lifetime of the development and undefended and breach scenario runs must be completed.

The level to which the development must be raised for flood risk mitigation will be determined based on the outcome of the fluvial, tidal, and high ground removed model runs with Upper End climate change allowance.

If this results in increased water levels offsite, options will be proposed for mitigation.

If the site floods in the 1% AEP + Higher Central Climate Change (fluvial) or 0.5% AEP + Higher Central (tidal) events then level-for-level compensation will be required.

A sequential test must be completed, including assessment of additional sources of flooding (groundwater, surface water) and evidence of Flood Risk Assessment must be submitted to the LLFA. Detailed of alternative sites to be assessed has already been gathered by the Homes England with pre-agreement on scope with the LPA secured.

4. Key staff required

The Agency requires a central contact or project manager who will oversee the work as well as the necessary technical specialists. Personnel should be referenced in the Resource and Pricing Schedule with CVs provided if necessary.

5. Other consultants being used/procured

A consortium of consultants led by WSP Ltd are retained to assist with the planning application and this includes drainage design, ground investigation and ecology, disciplines which interact with this commission. The intention is that once the flooding commission is completed, the WSP-led consortium will complete and update the design and technical work associated with the planning application and re-submit it to the planning authority.

In addition, the Agency will instruct a consultant to undertake a Financial Viability Appraisal (FVA) to support scheme design. This will test the viability of different design options including the mitigation required to address flooding. All bids should include the time necessary to work input into the FVA.

There is the expectation that an SI contractor will be commissioned by the Consultant and will undertake work under their instruction, inline with Homes England Terms and Conditions under the DARTS Framework inline with insurance and Warranty. Back to back appointments are required prior to any contract being executed.

6. Meeting and reporting requirements

The commission will be managed jointly by Homes England's Development and Technical teams. The supplier will therefore be expected to work with agency employees engaged with the technical and planning aspects of the scheme.

The supplier will need to prepare a report and set of supporting model files which address the EA and LLFA's comments. This will need to be submitted to the EA and LLFA, followed by a period of scrutiny and engagement. The supplier should include in their bid all work necessary or potentially necessary to reach agreement with the EA and LLFA including meetings, correspondence and updates to their report.

Meeting Requirements

Start-up meeting

One start up meeting on-site to discuss the commission and clarify Agency requirements.

Review meetings

Six review / update meetings held via Teams at key points in the commission.

Poor Performance Meeting

These meetings will hopefully not be required. However, if poor performance is repeated following escalation to the Supplier's Key Personnel to resolve the issue, as required in the Framework Management Schedule of the Framework Contract, the Framework Manager must be notified and Homes England may call for a Poor Performance Meeting. Beforehand, Homes England will present areas of concern so that the Supplier and Homes England can discuss what happened and why, what will be done to prevent it happening again and how matters will improve. The Supplier subject to such a meeting would be expected to outline in writing in a Rectification Plan afterwards what improvements/modifications they will be putting in place. There will be a maximum of two Poor Performance Meetings before termination of the commission.

C CONTRACT MATTERS

1. Payment

Fees to be paid upon completion of agreed milestones. These milestones should be set out by the supplier in their bid and will be agreed at the start-up meeting.

2. Collateral Warranty

A Collateral Warranty is required to enable Homes England current and future development partners to rely on the findings of this work when purchasing the site and progressing their reserved matters applications.

The site will be disposed of in phases and multiple Collateral Warranties may be required.

There will not be there be any opportunity to amend the provisions of the standard Collateral Warranty documentation in the DARTS framework agreement.

3. Termination

Should performance during the period of this appointment prove unsatisfactory following the Poor Performance meeting provisions set out in the Management section above, Homes England will exercise its right under the Termination and Suspension of the Contract clause in the Framework Contract to give notice to terminate the arrangement with immediate effect.

If the services are no longer required, for whatever reason, then Homes England reserves the right to terminate the appointment and pay for services completed at that point.

Part 2 - Instructions for Submitting a Response

1. General

- 1.1 Please refer to the ProContract Portal Advert for the Further Competition deadline. Tender responses **must** be submitted on ProContract. Please regularly check ProContract for any amendments to the Further Competition deadline. For all ProContract portal issues please contact ProContractSuppliers@proactis.com.
- 1.2 Suppliers **must** ensure that suitable provision is made to ensure that the submission is made on time. Any tender responses received after the Further Competition deadline shall not be opened or considered unless Homes England, exercising its absolute discretion, considers it reasonable to do so. Homes England, may, however, at its own absolute discretion extend the Further Competition deadline and shall notify all Suppliers of any change via ProContract.
- 1.3 **Please note all communications during the tender period will be via the ProContract website. All Suppliers that have registered their interest for the Procurement will receive a direct email notification from ProContract on any updates via the Suppliers registered email address. No approach of any kind should be made to any other person within, or associated with, Homes England. It is the Suppliers responsibility to check the ProContract website for any updates to the Procurement process. No claim on the grounds of lack of knowledge of the above mentioned item will be entertained.**
- 1.4 The Supplier must check the Further Competition ITT for obvious errors and missing information. Should any such errors or omissions be discovered the Supplier must send a message via the messaging function on ProContract. No alteration may be made to any of the documents attached thereto without the written authorisation of Homes England. If any alterations are made, or if these instructions are not fully complied with, the tender response may be rejected.
- 1.5 All clarification requests must be sent using ProContract no later than 5 working days before the Further Competition deadline shown on ProContract. Any queries submitted after this may not be answered. Homes England will respond to clarifications as soon as practicable.
- 1.6 Suppliers should specify in their clarification questions if they wish the clarification to be considered as confidential between themselves and Homes England. Homes England will consider any such request and will either respond on a confidential basis or give the Supplier the right to withdraw the clarification question. If the Supplier does not elect to withdraw the question and Homes England considers any clarification question to be of material significance, both the question and the answer will be communicated, in a suitably anonymous form, to all prospective Suppliers who have responded. If Suppliers consider that page limits set out in Section 20 (Evaluation Criteria) are insufficient to provide the information required by the question then a clarification request should be raised. No guarantee can be given that the page limit will be increased.
- 1.7 Tender responses must not be accompanied by statements that could be construed as rendering the tender response equivocal and/or placing it on a different footing from other Suppliers. Only tender responses submitted without qualification strictly in accordance with the Further Competition ITT (or subsequently amended by Homes England) will be accepted for consideration. Homes England's decision on whether or not a tender response is acceptable will be final.
- 1.8 Tender responses must be written in English and both Microsoft and PDF versions of tender documents must be submitted.

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1.9 Under no circumstances shall Homes England incur any liability in respect of this Further Competition or any supporting documentation. Homes England will not reimburse the costs incurred by Suppliers in connection with the preparation and submission of their tender response to this Further Competition.

1.10 Homes England reserves the right to cancel this Further Competition process at any time.

2. Conflict of Interest

2.1 Homes England will exclude the Supplier if there is a conflict of interest which cannot be effectively remedied. The concept of a conflict of interest includes any situation where relevant staff members have, directly or indirectly, a financial, economic or other personal interest which might be perceived to compromise their impartiality and independence in the context of the procurement procedure.

2.2 Where there is any indication that a conflict of interest exists or may arise then it is the responsibility of the Supplier to inform Homes England, detailing the conflict in a separate Appendix.

3. Confidentiality

3.1 This Further Competition ITT and associated information is confidential and shall not be disclosed to any third party without the prior written consent of Homes England. Copyright in this Further Competition ITT is vested in Homes England and may not be reproduced, copied or stored on any medium without Homes England's prior written consent.

3.2 Suppliers shall not undertake, cause or permit to be undertaken at any time any publicity in respect of this Further Competition process in any media without the prior written consent of Homes England.

4. Quality

4.1 A Response Form template has been provided in Part 3 to respond to the Quality questions detailed in Section 8. The Response Form must be **completed and returned** as part of the tender response.

4.2 Suppliers must provide information on proposed staff in the Response Form and Resource and Pricing Schedule provided in Part 3. If the Supplier is a consortium or intends to sub-contract the Services, in whole or in part, then it should specify precisely in the Resource and Pricing Schedule which economic operator shall perform the Services (or parts thereof).

5. Pricing

5.1 A Resource and Pricing schedule has been provided with this Further Competition ITT which must be completed and returned as part of the tender response.

5.2 The pricing approach for this Further Competition is:

- lump sum fixed fee for each of the milestone stages referenced in the Indicative programme table. Please provide fee for each individual milestone (i.e. fully itemised)
- time charged up to a cap (to be proposed by the consultant) for engagement with the EA and LLFA)

Suppliers should submit day rates in addition to the Resource and Pricing Schedule, with the Framework Rates as the maximum for each grade

5.3 The list of activities in the Resource and Pricing Schedule is not exhaustive and there may be additional duties/services required that will emerge as work is undertaken. This commission may be extended on

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client instruction to cover such matters as arise, based on a time charged fee schedule completed in the tender response. The commission will only be extended if the services relate to the original objective of the overall call off contract.

- 5.4 Suppliers are reminded that day rates for all individuals must be the agreed Framework Contract rates unless discounted rates are offered and will be used for all of the services.

6. Evaluation

- 6.1 Tender responses will be evaluated on the basis of the overall most economically advantageous Tender (MEAT) submitted to Homes England. The evaluation criteria (and relative weightings) that Homes England will use to determine the most economically advantageous Tender are set out in Section 20 (Evaluation Criteria) below and the scoring approach is detailed in Section 25 (Worked Example). Scores will be rounded to two decimal places.
- 6.2 Evaluators will initially work independently. Once they have completed their independent evaluation they will meet to discuss, understand and moderate any differences they have via a consensus meeting, where a single consensus score for each question will be agreed.
- 6.3 Award decisions will be subject to the standstill period if over the FTS Services threshold. Unsuccessful Framework Suppliers will be provided with their scores and feedback to explain the award decision.

7. Documents to be returned

- 7.1 Suppliers are expected to provide the following information in response to this Further Competition ITT:
- Completed Response Form
 - Completed Resource and Pricing Schedule
 - Supporting CV's for staff proposed to undertake this commission (no more than 2 pages each)

8. Evaluation criteria

8.1 Scoring method

Quality will account for 60% of the Overall Score. The following scoring methodology will apply:

5 – Excellent Satisfies the requirement and demonstrates exceptional understanding and evidence in their ability/proposed methodology to deliver a solution for the required supplies/services. Response identifies factors that will offer potential added value, with evidence to support the response.

4 – Good Satisfies the requirement with minor additional benefits. Above average demonstration by the Supplier of the understanding and evidence in their ability/proposed methodology to deliver a solution for the required supplies/services. Response identifies factors that will offer potential added value, with evidence to support the response.

3 – Acceptable Satisfies the requirement. Demonstration by the Supplier of the understanding and evidence in their ability/proposed methodology to deliver a solution for the required supplies/services.

2 - Minor Reservations Some minor reservations of the Supplier's understanding and proposed methodology, with limited evidence to support the response.

1 – Major Reservations/Non-compliant Major reservations of the Supplier's understanding and proposed methodology, with little or no evidence to support the response.

0 - Unacceptable/Non-compliant Does not meet the requirement. Does not comply and/or insufficient information provided to demonstrate that the Supplier has the understanding or suitable methodology, with little or no evidence to support the response.

PLEASE NOTE:

If your response scores 0 or 1 for any one question your overall submission will be deemed as a fail.

Any text beyond the specified page limits below will be ignored and will not be evaluated.

Homes England will not cross-reference to other answers when assessing quality responses.

Evaluators will initially work independently. Once they have completed their independent evaluation they will meet to discuss, understand and moderate any differences they have via a consensus meeting, where a single consensus score for each question will be agreed.

8.2 Quality Questions

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Lots 1 and 2 – ITT questions

Number	Criteria	Tender requirement	Weighting	A4 limit
1	Capability	<p>Explain your understanding of the key technical challenges for this project and your team’s capability to tackle these.</p> <p>This must be evidenced with details of at least one relevant project during the last five years to illustrate the response. If you have worked on a relevant Homes England project in the last five years, this project or projects should be referred to here.</p>	30%	2 pages
2	Understanding of project specific topic	<p>What options might you consider for floodplain compensation and how would you approach modelling this?</p> <p>This must be evidenced with details of at least one relevant project during the last five years to illustrate the response. If you have worked on a relevant Homes England project in the last five years, this project or projects should be referred to here</p>	30%	2 pages
Project Manager to select appropriate Methodology questions for your project				
3	Methodology and Resourcing	<p>Set out all of the resources required to deliver this commission.</p> <p>The information sought will be a method statement (2 pages) to include:</p> <ul style="list-style-type: none"> • Expertise across the team to cover the scope of services for this project • Rationale for identifying this team - this can include sub-consultants and the rationale for their inclusion and how they add strength to the team. • A clear structure diagram that reflects the services and technical issues outlined in the brief • <p>The method statement will be evidenced by 4 CVs for key staff (up to 2 pages each) – amend as required</p>	25%	10 pages – 2 pages for method statement and 8 pages for 4 CVs
4	Programme and risk	<p>Please set out a programme and explain how each required discipline will deliver their scope of services during the course of this programme.</p>	15%.	4 pages in total - 2 pages for approach plus 2 pages

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		<ul style="list-style-type: none"> • Demonstrate how you will ensure that solutions are technically deliverable and do not have internal conflicts, e.g. ecology, landscape and drainage proposals all work together. • Review the project brief and all due diligence information provided. • Explain where you see the key risks to programme and cost, and how you will mitigate these. These might include technical, planning, stakeholder or other risks. • Please include a detailed delivery programme based on the indicative programme provided in Part 1B of this Further Competition ITT showing key activities and dependencies. 	for programme (which can be A3)
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Price will account for 40% of the Overall Score. . The lowest price will gain the maximum marks with other prices expressed as a proportion of the best score using the maths explained in the worked example below.

Criteria	Demonstrated by	Weighting
Price	Completed Resource and Pricing Schedule	40%

8.3 Worked example of weighting and scoring

How your quality scoring will be used to give a weighted score

Bidder	Question	Score out of 5	Weighting	Weighting Multiplier	Weighted Score	Total Weighted Score
Supplier A	1	3	30%	3.6	10.8	37.8
	2	4	30%	3.6	14.4	
	3	3	25%	3	9	

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	4	2	15%	1.8	3.6	
Supplier B	1	5	30%	3.6	18	49.8
	2	4	30%	3.6	14.4	
	3	4	25%	3	12	
	4	3	15%	1.8	5.4	
Supplier C	1	2	30%	3.6	7.2	N/A (fail)*
	2	1	30%	3.6	N/A (fail)*	
	3	2	25%	3	6	
	4	2	15%	1.8	3.6	

* in the example above Supplier C's pricing will not be scored

Worked example of how your price will be used to calculate a score

Bidder	Form of Tender price	Lowest price/Supplier's price (as %)	Price Score (out of 40)
Supplier A	350	$350/350 = 100\%$	$100\% * 40 = 40$
Supplier B	700	$350/700 = 50\%$	$50\% * 40 = 20$
Supplier C	250	N/A	N/A

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Worked example of Overall Score and Ranking

Bidder	Total Quality Score	Price Score	Total Score	Ranked Position
Supplier A	37.8	40	77.8	1
Supplier B	49.8	20	69.8	2
Supplier C	N/A	N/A	N/A	N/A

Part 3 – Response Form

Framework:	[insert]
Project Title:	[insert]
ProContract Identification Number:	DN [insert]
Supplier:	[insert]
Date:	[insert]

To enable Homes England to evaluate your tender, we require Suppliers to respond to the questions below whilst making reference to the evaluation section above.

Please refer to the evaluation section for page limits for each question. Any text beyond this will be ignored and will not be evaluated.

1. Resourcing

2. Programme and Risk

3. Methodology

4. Social Value

Resource and Pricing Schedule

Excel spreadsheet to be embedded by Supplier in response. Please itemise the fees based on the milestone schedule provided in the Indicative Programme section above.