

Guildford Borough Council

Guildford Economic Regeneration Programme

Flood - Stage 2

Reference: GRP-ARP-ZZ-XX-RP-CX-0010

Issue | 15 September 2022

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 279440-00

Ove Arup & Partners Limited
Parkin House
8 St. Thomas Street
Hampshire SO23 9HE
United Kingdom
arup.com

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1. Executive Summary

Guildford town centre has suffered from significant flooding in recent years and flood protection of existing and proposed development is a key consideration for the regeneration masterplan. Climate change projections show a potential increase in peak river flow of 71% in the River Wey for the 2080s and therefore the current flood risk is only likely to increase.

The Environment Agency (EA) is a key partner in delivering a flood defence strategy for the town. Since the end of Stage 1, significant progress has been made with the EA, namely agreeing terms of reference and funding contribution from GBC to develop the outline business case for the flood alleviation scheme and development of a preferred defence alignment through the town centre, including upstream flood storage compensation.

Ideas for how the defence alignment could be incorporated into the masterplan have been explored, with the aim of providing landscaped areas at the river's edge that would flood in peak events but act as amenity spaces and a movement corridor in normal times.

Flood defences through the town will be delivered in phases along with the main development. Section of the defence associated with protection of existing properties will be delivered by the EA, with GBC and plot developers delivering defences associated with new development.

Collaboration with the EA will continue whilst the Flood Alleviation Scheme Outline Business Case is produced (by the EA) and funding is secured to deliver the project. Public consultation will be undertaken as part of this process. Key for the masterplan will be updating the flood mapping (by the EA) to show areas benefitting from defence, leading to an update of the Strategic Flood Risk Assessment and Sequential Test.

2. Introduction

The background to the challenge of flooding within Guildford Town Centre was presented in the Stage 1 report (reference GRP-ARP-ZZ-XX-RP-CX-0001, Issue 02 23 March 2021). The Stage 2 report draws on this background and presents the work undertaken during Stage 2 to develop the Flood Defence strategy.

2.1 Conclusions at end of Stage 1

The majority of the potential development area alongside the river falls in Flood Zone 3 – Functional Floodplain, and current national and local policy would suggest development in this zone is difficult but achievable. The Environment Agency have developed flood alleviation scheme proposals in the past with the aim of protecting existing properties affected by flooding. Through collaboration with the EA, the impacts for the proposed flood alleviation scheme have been broadened to encompass protection of proposed new development as well as existing properties.

During Stage 1, a number of options were identified for how a flood alleviation scheme could be achieved in the town centre, with opportunities identified to incorporate both town centre and catchment wide interventions to lessen the impact within the town centre.

In collaboration with the Environment Agency, options for flood defences within the town centre are being explored with the aim that, when implemented, the town centre's flood zone will be altered to enable development to be permitted more easily. The defensive line within the town centre will take multiple forms to ensure it can be integrated within the proposed spatial masterplan, delivering benefits not only in the form of built development, but enhanced bio-diversity, sustainability and carbon sequestration.

As a key stakeholder, collaboration with the Environment Agency is ongoing. The EA have undertaken an initial modelling exercise to establish an alignment of the defensive line within the town centre that would provide suitable protection without causing detrimental impacts either upstream or downstream.

The initial alignment will be reviewed and developed with the design team during Stage 2 to incorporate the flood defences within the proposed spatial masterplan, undertaking iterations until a preferred solution is found. Once all parties have settled on a preferred alignment, the EA will develop the outline business case to progress the Flood Alleviation Scheme through detailed design and planning in order to secure government funding.

Delivery of the flood alleviation scheme is expected to be through a partnership approach primarily between GBC and the EA, with plot developers responsible for delivery of the defensive line as appropriate. For interventions beyond the town centre; such as flood plain compensatory storage and natural flood management techniques, engagement and collaboration with local stakeholders will be promoted.

The key next step is to examine the initial defensive line developed by the EA and establish how it can be incorporated into the masterplan to bring the quantum of development aimed for.

3. Stage 2 Progress

The River Wey is designated as a main river and as such the EA is responsible for its maintenance, improvement and any construction activities required to manage flood risk. The EA is therefore a key partner for the delivery of the flood defence scheme. The focus of Stage 2 has been ongoing collaboration with the EA to develop the preferred defence alignment to enable them to commence the modelling and Outline Business Case work.

Surrey County Council, in their role as Lead Local Flood Authority (LLFA) also have a part to play in managing flood risk. Within the masterplan area this mainly focusses on managing surface water run off, however, as part of the Surrey Flood Risk Partnership Board they oversee the work of various different authorities and deliver the Surrey Flood Risk Management Strategy, of which the Guildford flood defence scheme will be a key component.

3.1 Terms of Reference with the EA

Terms of reference have been agreed with the EA covering the desired outputs of the flood alleviation scheme project in respect of: the protection of developable lands, in principle design coordination, pre-construction expenditure, programme and funding principles.

Through a grant from Surrey County Council's Empty Homes Fund, GBC have committed to providing funding to the EA for their work up to completion of the Outline Business Case (up to the end of 2023).

3.2 Alignment


The proposed defence alignment has gone through a number of iterations since Stage 1. The alignment that will be used for modelling is shown in Appendix A. Public consultation will be undertaken on the proposed alignment, lead by the EA, and as such the alignment may still be subject to variation.

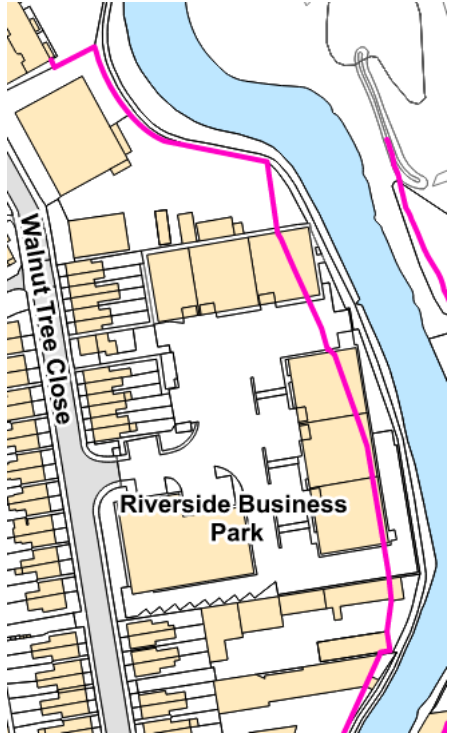

The key changes between the alignment presented in Stage 1 and this alignment are summarised in Table 1.

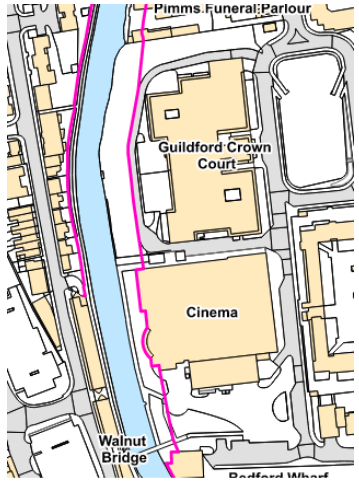

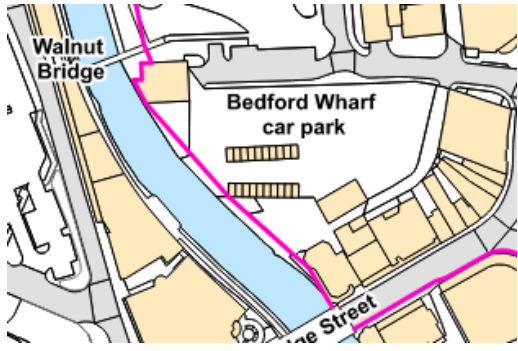

The alignment agreed at the end of Stage 1 aimed to maximise development zones by keeping the offset from the river small. However, the modelling identified flood depths and hence defence structure could be up to 2.8m in places. Increasing the offset from the river should help to reduce the height of the defence and this is generally what has been adopted in Stage 2.

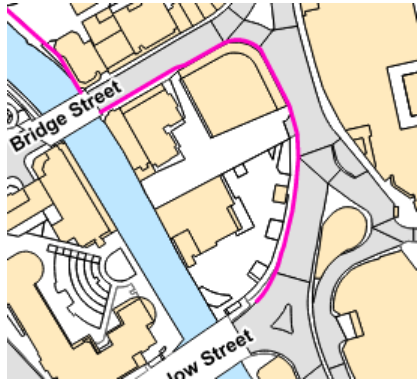


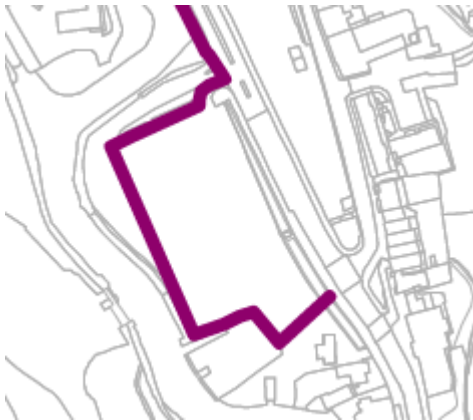
The Stage 1 alignment did not have any flood defence identified for Millmead – this has been added in Stage 2 to reflect the need to defend existing properties in this area.



Table 1: Defence alignment comparisons Stage 1 - 2

Location	Stage 1	Stage 2	Reason for change
<p>North east bank – Dapdune Wharf/William Road/Arriva Bus Depot</p>			<p>Initial model run showed flood waters “returned” around the top of the defence line at Dapdune Wharf causing flooding from the north. Section of defence line included perpendicular to river to counteract this flood route.</p> <p>Through the Arriva Bus Depot site, the defence line is offset further back from the river, approx. 20m, to correspond with proposed movement corridor.</p>

Location	Stage 1	Stage 2	Reason for change
<p>North west bank – Riverside Business Park</p>			<p>Stage 1 defence line followed the edge of the existing river path from the north southwards to the edge of vegetation before moving inboard with an offset of approximately 14m.</p> <p>The Stage 1 defence line diverges from the river path further north and achieves a set back of approximately 20m through the plot.</p> <p>The increased set back is a response to balance the alignments on either side of the river.</p>

Location	Stage 1	Stage 2	Reason for change
Bedford Wharf North			<p>Offset has been increased to approximately 26m throughout the Bedford Wharf zone. This reflects masterplan proposals to include a significant riverside landscape zone.</p>
Bedford Wharf South			<p>Offset from river has been increased to approximately 26m at north. Offset decreases towards the south but maintains approximately 8m until existing Blenheim House building on corner. This offset reflects masterplan proposals to maintain movement corridor along river.</p>

Location	Stage 1	Stage 2	Reason for change
Town Wharf			<p>Alignment has been brought close to river edge in response to fact that this zone comprises existing buildings which will be retained in the masterplan and therefore should be protected by the defence.</p>
Millbrook			<p>Offset increased to approximately 20m where possible reflecting masterplan proposals for this area.</p>

Location	Stage 1	Stage 2	Reason for change
Millbank	No defence proposed		<p>No defence was proposed in Stage 1 alignment. This resulted in a number of existing properties remaining at risk of flooding.</p> <p>New alignment (shown in orange) aims to protect existing properties on west bank of the river.</p>
Portsmouth Road Car Park	No defence proposed		<p>No defence was proposed in Stage 1 alignment.</p> <p>Stage 2 proposes an alignment approx 18m offset from the river. This reflects masterplan proposals to include built development on this plot.</p>

3.2.1 Climate Change

In July 2021, the EA provided updated climate change allowances for peak river flows in England. These are now defined for specific river catchments. The allowances for the River Wey are shown in Table 2.

Table 2 Wey and tributaries Management Catchment peak river flow allowances

	Central	Higher	Upper
2020s	10%	15%	28%
2050s	9%	17%	36%
2080s	24%	36%	71%

For capital schemes the Central allowance is used, therefore an allowance of **24%** will be applied to current river levels when assessing the required height of flood defences, and the compensatory flood storage requirements.

For Strategic Flood Risk assessments, both the Central and Higher allowances should be used for sensitivity testing. The Upper allowance is applied to nationally significant infrastructure projects, new settlements and urban extensions where a credible maximum scenario should be assessed. There are no aspects of the proposed masterplan that would require this assessment.

The Central allowance should be used for assessing access and egress requirements.

3.2.2 Freeboard

Freeboard is normally provided on flood defence schemes to take into account uncertainties. It has been agreed that freeboard should be **600mm** for this scheme, although this will be reviewed as modelling is progressed.

3.3 Compensatory Flood Storage

Floodplain lost due to a flood alleviation scheme must be provided within the catchment to ensure flood risk is not simply passed somewhere else.

With the initial defensive line, the EA's modelling has identified a volume of **92,516m³** of storage will be lost from the floodplain. They have gone on to identify four areas in Shalford, upstream of Guildford, where this water could be accommodated. Refer to Appendix B for further details.

This is a key aspect of the scheme and demonstrates that a viable solution for flood defence within the town centre can be achieved.

Further refinement of the required volume to be accommodated and the form and location of the proposed storage will be undertaken by the EA as their modelling progresses.

3.4 Form of flood defence

The overarching design principle is to make space for water. This will be achieved through:

- Creating defended development areas with development elevated above flood levels
- The use of green/blue zones for public realm that work with water during times of flood
- Maximising bio-diversity opportunities
- Creating active leisure spaces
- Establishing a riverside movement corridor

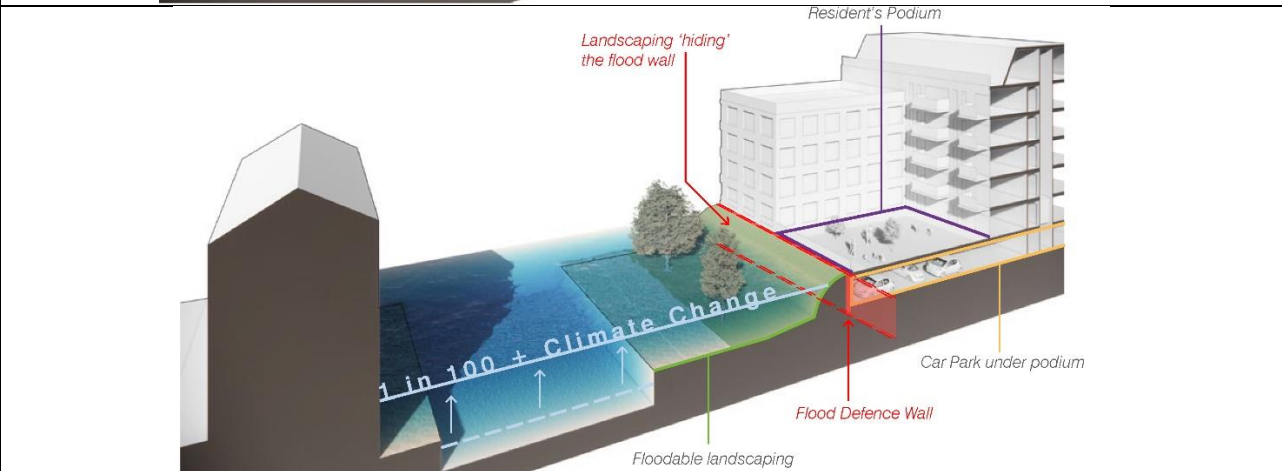
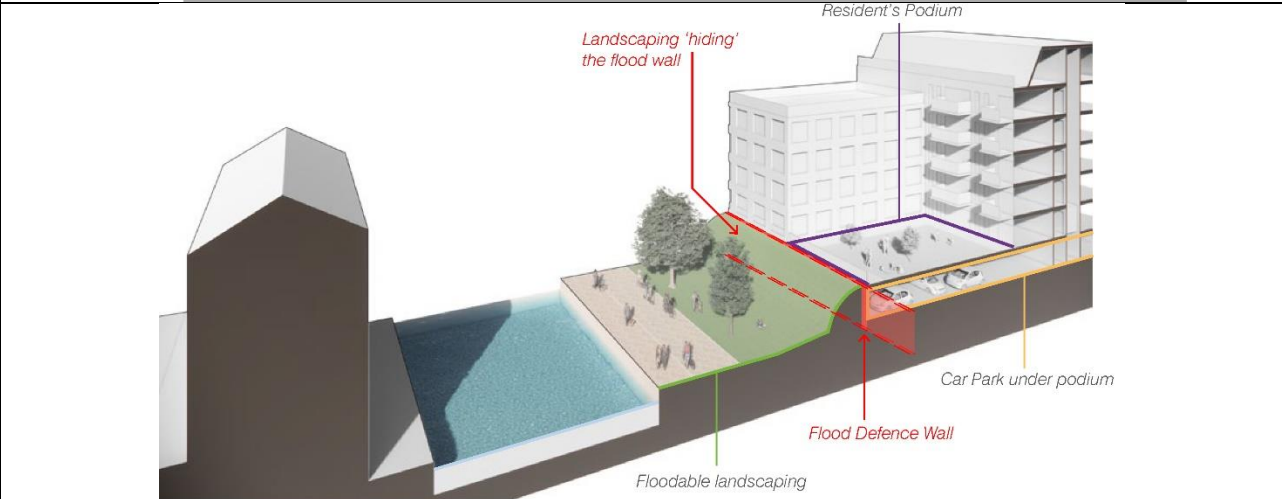
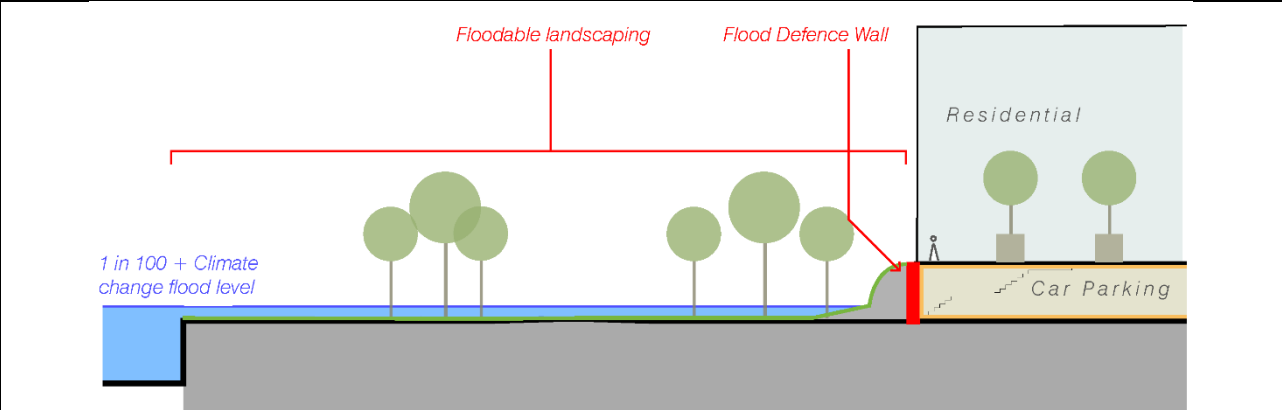
These principles are described in the images below.

Bedford Wharf

Hard and soft landscape at the river's edge is designed to tolerate flooding in peak events.

The flood defence wall is incorporated into the western edge of the development plots and "hidden" by the landscaping against it.

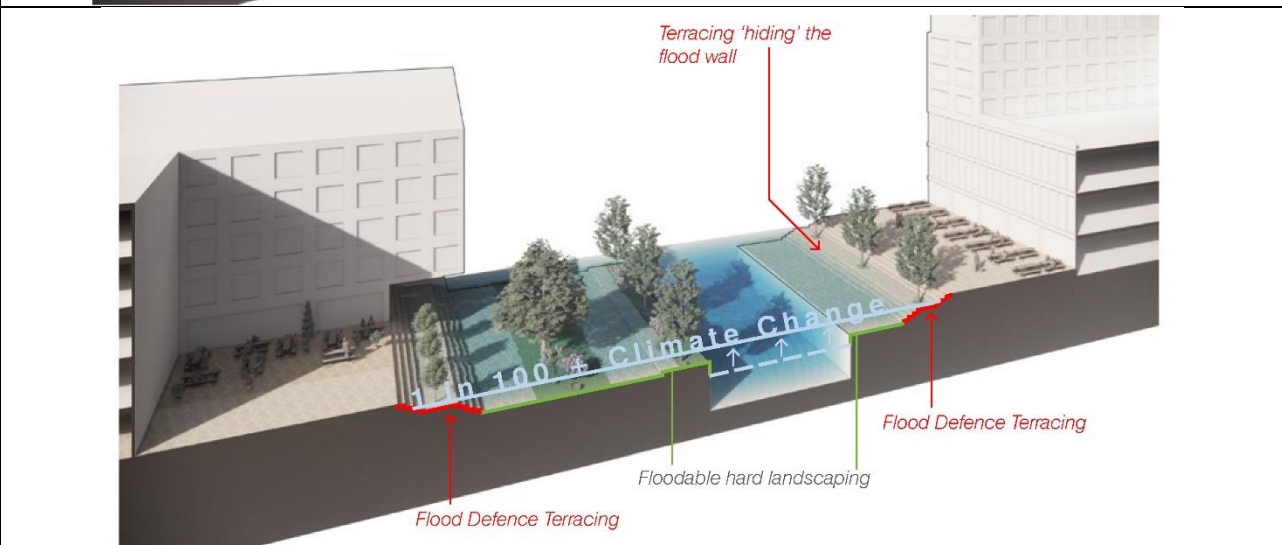
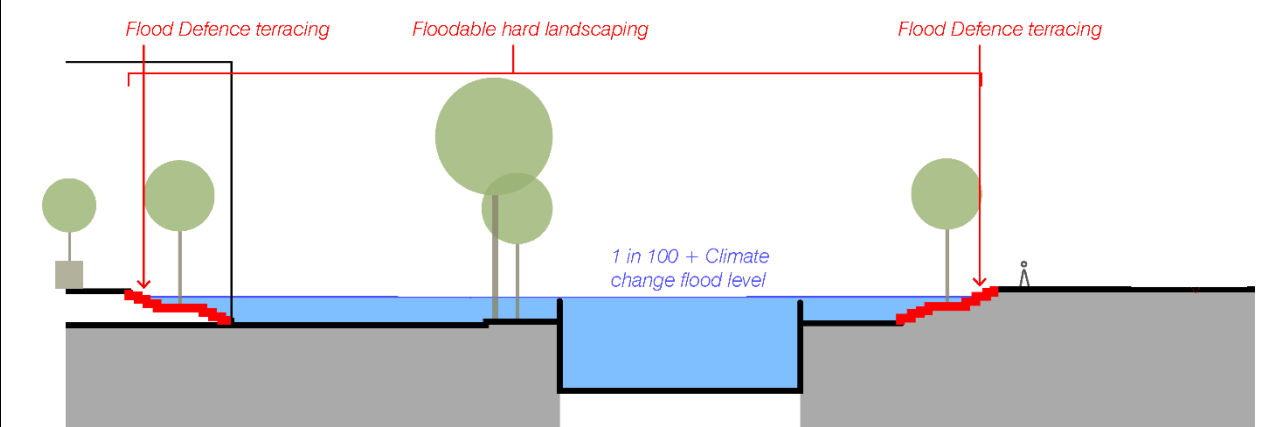
Access and egress for residents of the blocks would be provided from podium level to the east side of the blocks, away from river and set above flood levels.



Town Wharf

Hard landscape at the river's edge is designed to tolerate flooding in peak events.

The flood defence is achieved through terracing within the hard landscaping.



3.5 Phasing

The masterplan is expected to be built out over a period of approximately 5 years, from 2025 to 2030. With parts of the flood defence being incorporated into development plots, as described in section 3.4, the defence will also therefore be delivered in a phased manner.

An initial phasing plan was discussed with the EA. The principle of delivering the defence in phases was agreed and the preferred phasing sequence has been amended to reflect discussion (refer to Appendix C). Broadly the phasing is as follows:

- Millbrook and Millmead are likely to be a vital first phase (Phase A)
- Phase B (Town Wharf and Portsmouth Street Car Park) can probably be delivered in a phased manner as proposed, although the resulting landscape zone in the Portsmouth Road Car Park would provide a good opportunity to provide space for water so early delivery could be beneficial
- Phase C (Bedford Wharf) is intrinsically linked with Phase D (Mary Road) and so may not be able to deliver separately, it may require temporary barriers to be installed until such time as the development comes along.

Compensatory Flood Storage areas will need to be delivered in advance of the flood defences.

Further work will be undertaken with the EA as more model information is available.

3.6 Delivery of Flood Defence Scheme

The flood defence scheme in Guildford is a mixture of defence of existing properties that have suffered from flooding in the past, or are at risk, and defence to enable new development.

It is proposed that where the defence has been identified as required for defending existing properties, these works should be undertaken by the EA. These areas include:

- Riverside Business Park and Walnut Tree Close to the north west
- Mary Road and William Road to the north east
- Millmead
- Millbrook car park and north towards the Debenhams site.

The remaining areas would be delivered by the plot developers.

3.7 Planning Considerations

As noted in the Stage 1 report, the majority of Guildford town centre lies within Flood Zone 3. Any new development would need to pass the Sequential Test and Exception Test to be granted planning permission and, in accordance with NPPF, only essential infrastructure can be permitted. The Sequential Test has been undertaken for available sites within the town centre as part of the Strategic Flood Risk Assessment (SFRA), completed in May 2016. This concludes that no sites are suitable for residential development.

On completion of the flood alleviation scheme it is understood that the flood zone within the town centre would be modified and would be designated either “Flood Zone 3 Benefitting from Defence” or Flood Zone 2. This is the approach the EA has adopted where other towns have put in place flood defences, such as Derby. In either case, development would need to demonstrate that consideration has been given to both compensatory floodplain storage, and to providing safe access and egress during a flood or breach event. Compensatory floodplain storage will have to be delivered for the whole town centre so individual plots should not have to provide any further justification. Safe access and egress has been considered at masterplan level so plot developers should not need to consider much further, provided they are complying with the masterplan levels strategy.

The sequence and timeline for how this is expected to occur are described below:

Event	Timeframe	Comments	Planning Considerations
EA completes Outline Business Case	End 2023	This stage defines the scheme and demonstrates there is a technically viable solution and that funding sources have been identified.	At this stage, agreement would be provided by the EA's Sustainable Places Team that Flood Zones in Town Centre will be amended. At this point it is understood that the SFRA can be revised with new Sequential Test undertaken to show sites currently in Flood Zone 3 are developable, subject to planning conditions.
EA undertakes detailed design and completes Full Business Case	Mid 2025	Detailed design, securing funding and securing planning permission	Planning permission for new development can be sought.
Construction	Mid 2025 – Mid 2027		Sections of defence delivered as part of plots to be subject to EA construction methodology and sign off and compensatory flood plain storage delivered.

These assumptions need to be confirmed with the EA's Sustainable Places team.

4. Next Steps

The flood defence strategies have been significantly advanced during Stage 2 with the EA confirming the key aspect that they have been able to identify viable spaces for the necessary compensatory flood plain storage. Further work is still required as described below:

4.1 Conclude Flood Defence Alignment

The alignment of the flood defence has been discussed extensively with the EA and options put forward and considered by both parties. At this stage, the alignment that has been settled on (as shown in Appendix A) strikes a balance to be suitable to protect both existing properties and the proposed masterplan development plots. The EA have been keen to ensure the defence is “fair” with all plots contributing, and is balanced on both sides of the river.

The EA will use this alignment or hydraulic modelling to determine the height of any necessary defences. It is expected that further, minor, alignment adjustments may be undertaken until both parties are happy with the solution. The final alignment will then be taken forward by the EA to the Outline Business Case Process.

4.1.1 Public Consultation

Public consultation will be undertaken as part of the EA’s process to develop the scheme and progress the outline business case. Some alterations may be required to the defence alignment as a result of this consultation.

4.2 Develop Compensatory Floodplain Storage solutions

The work undertaken to date by the EA has established the likely volume of floodplain compensatory storage to be provided, as well as locations where this can be accommodated. The plots of land chosen are of little development potential as they all encompass areas of Flood Zone 3. They do present challenges of access being located in and among rail lines, however, details for how the levels can be adjusted to provide storage will be worked through by the EA in due course.

4.3 EA to develop outline design and business case

Once the alignment work has been concluded, the EA will continue to develop the outline design and the supporting business case. SGF will support the EA through this process.

4.4 Identify funding sources

The work undertaken by the EA will hopefully lead to receipt of a grant from central government to fund part of the flood alleviation scheme. However, this will not fund the entire scheme and therefore additional funding will need to be identified and secured. These are likely to be a combination of public sector grants and private sector contributions.

4.5 Develop designs for providing defence

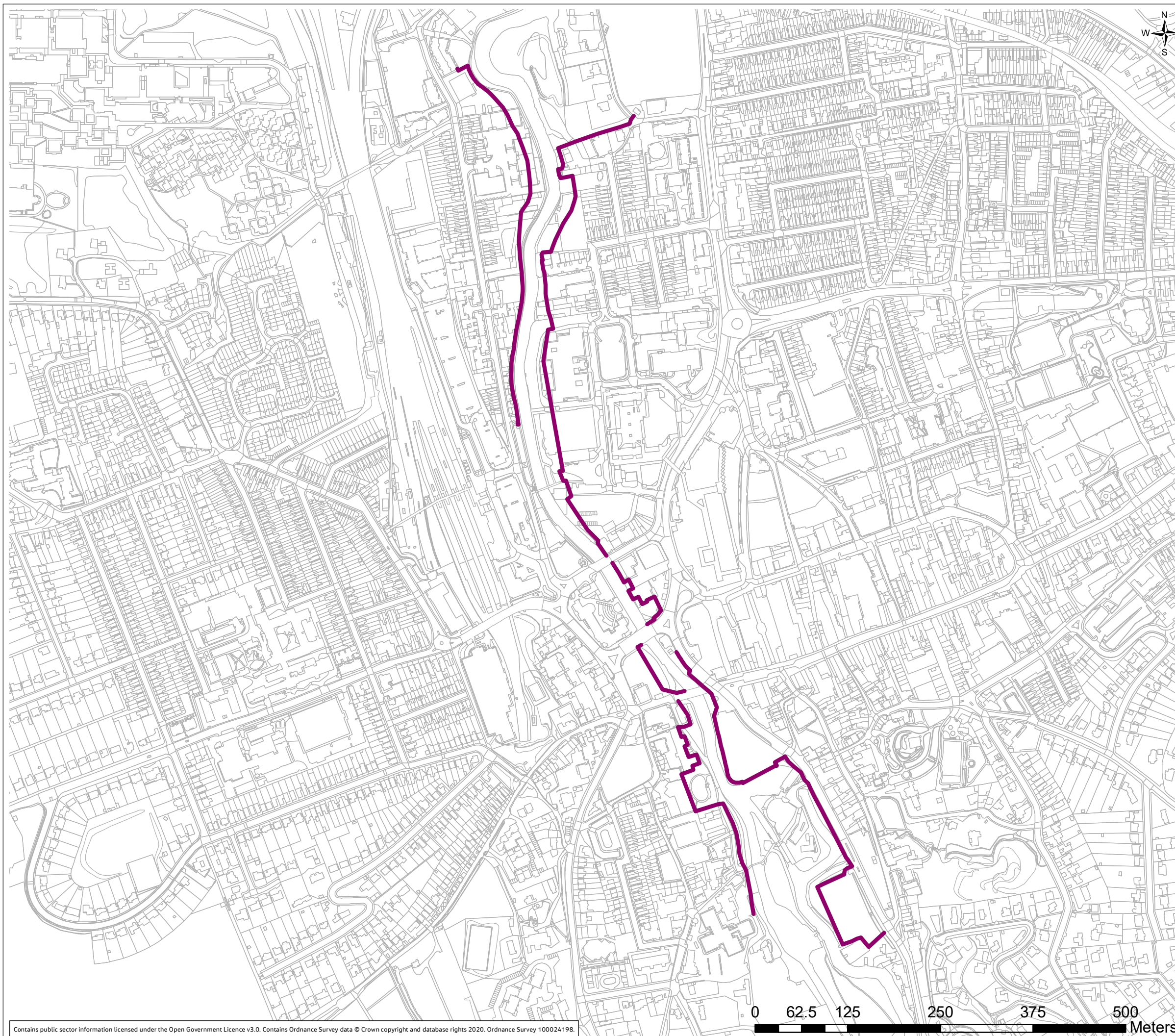
Once the EA’s modelling has been concluded and defence heights have been determined, designs for how this can be incorporated within the proposed development plots will be developed with the masterplan team.

4.6 Revised Sequential Test

As described earlier, the current Strategic Flood Risk Assessment for Guildford precludes development within much of the town centre as it is located within Flood Zone 3. At a point in time, it is expected that the flood zones will be modified and a revised Sequential Test can be undertaken giving more support to riverside development. It is vital that this is undertaken in consultation with the EA’s Sustainable Places team as they are a statutory consultee and have the power to object to any planning permission on the grounds of flood risk.

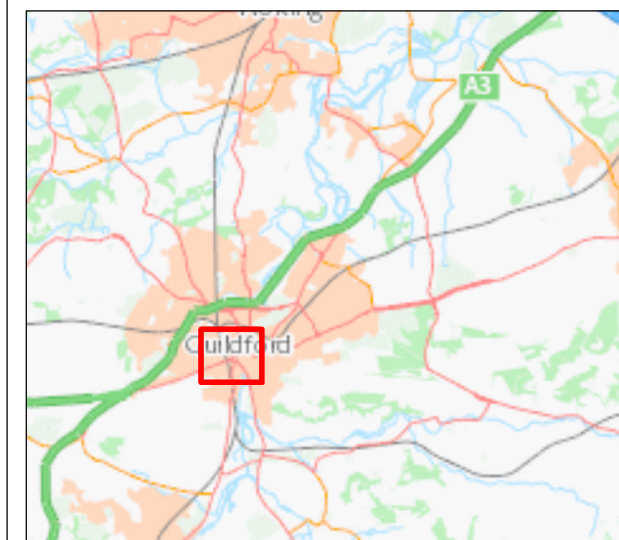
Appendix A

Proposed Flood Defence Alignment



Legend

— Updated alignment July 2022



0	July 2022	Initial Issue	RS	SF	SF	SF
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

Jacobs
 1180 Eskdale Road
 Winnersh, Wokingham, RG41 5TU
 www.jacobs.com

Client
 Environment Agency

Project
 GUILDFORD FLOOD ALLEVIATION SCHEME

Drawing Title
 UPDATED FLOOD DEFENCE ALIGNMENT
 JULY 2022

Drawing Status
 FINAL

Scale @ A3
 1:5,000 **DO NOT SCALE**

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Appendix B

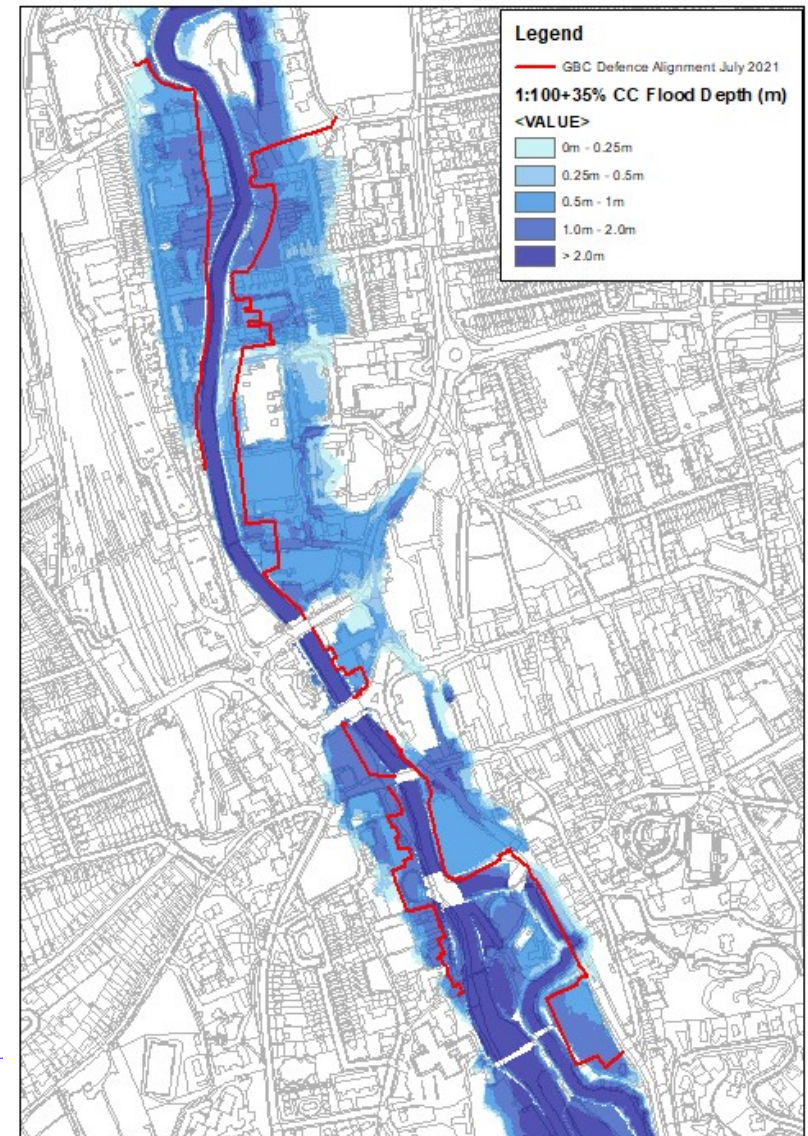
Compensatory Flood Storage Notes from Jacobs

Guildford FAS Compensatory Floodplain Storage Analysis V1

February 2022

Floodplain Storage Loss

- Volume of floodplain behind defences up to the 1:100 + Climate Change (35%) water level
- Uses proposed GBC flood defence alignment (not completely agreed by GBC – e.g. Walnut Tree Close, Mary Rd/William Rd)
- Total volume of storage lost = 92,516m³

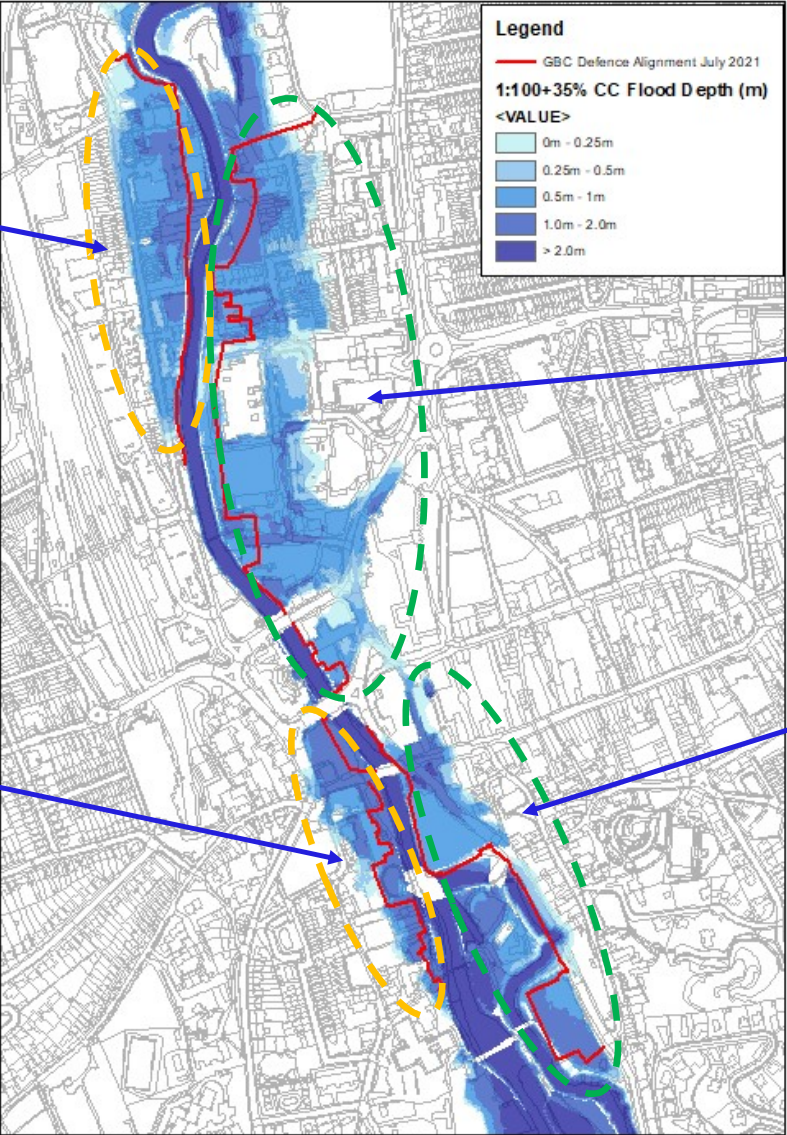


Left Bank Downstream
(Walnut Tree Close)

19,846m³

Left Bank Upstream
(Portsmouth Rd
Carpark, Millmead)

10,936m³



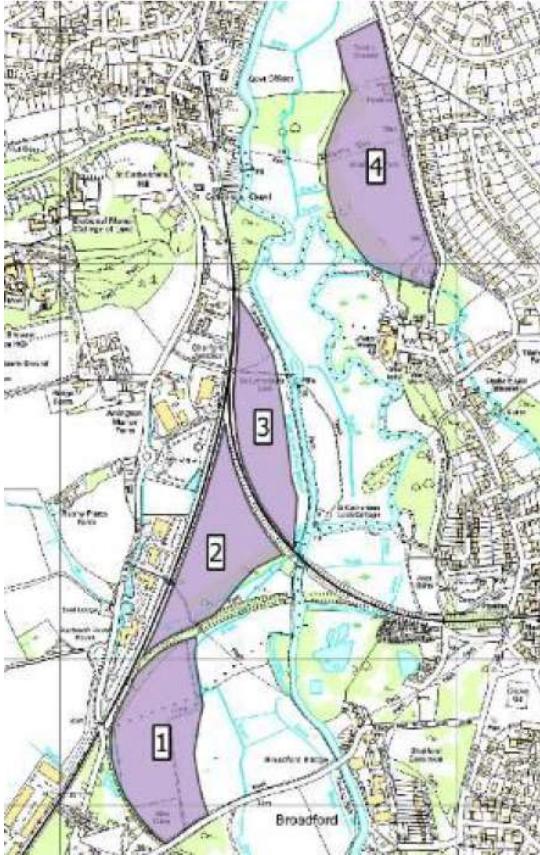
Right Bank Downstream
(Mary Rd, William Rd,
Bedford Wharf)

44,126m³

Right Bank Upstream
(Debenhams, Millbrook)

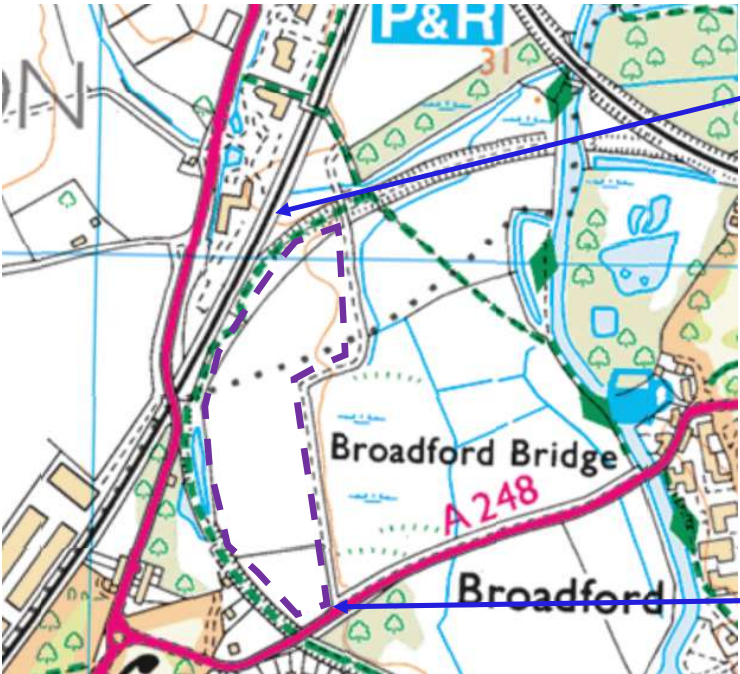
17,609m³

Compensatory Floodplain Storage Areas



- Four areas upstream of Guildford identified by Capita
- Initial analysis of volumes of storage available
- Avoided railways but may need to have greater offsets
- Not avoided vegetation, likely to be required

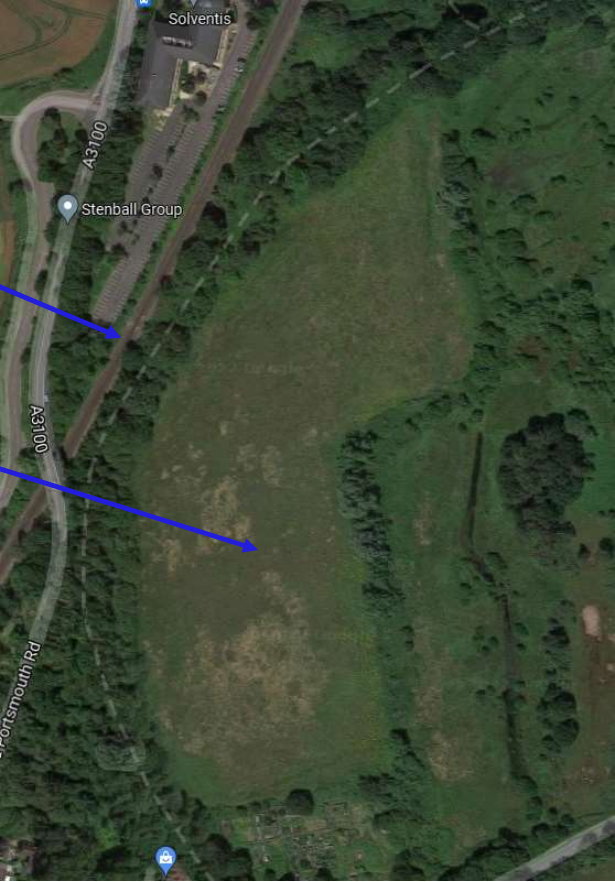
CSA Area 1



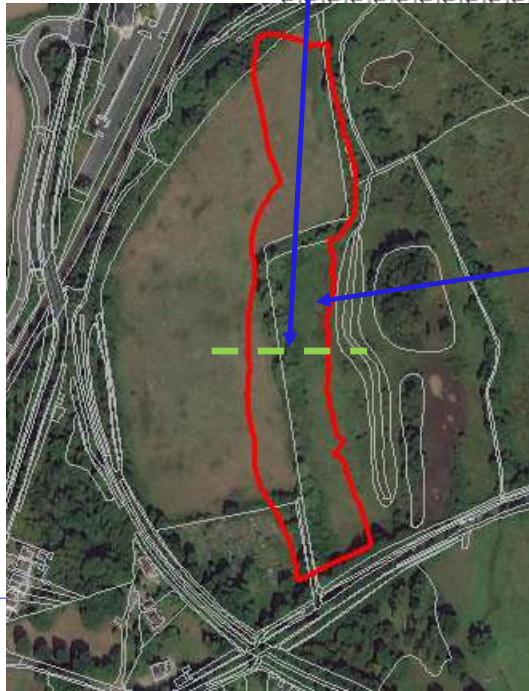
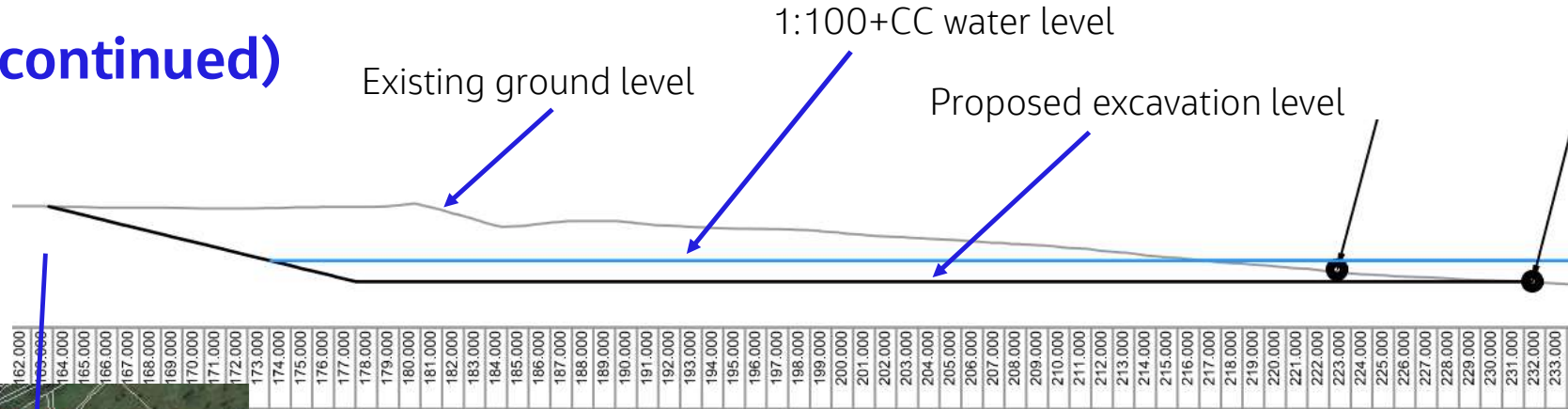
Railway

Limited existing vegetation (trees)

Potential road access



CSA Area 1 (continued)



Initial excavation extent considered to minimise overburden excavation.

Potential to increase excavation extent westwards to increase available volume, being aware of maintaining offset from railway.

Current extent leads to loss of hedgerow.

Volume available = 22,387m³

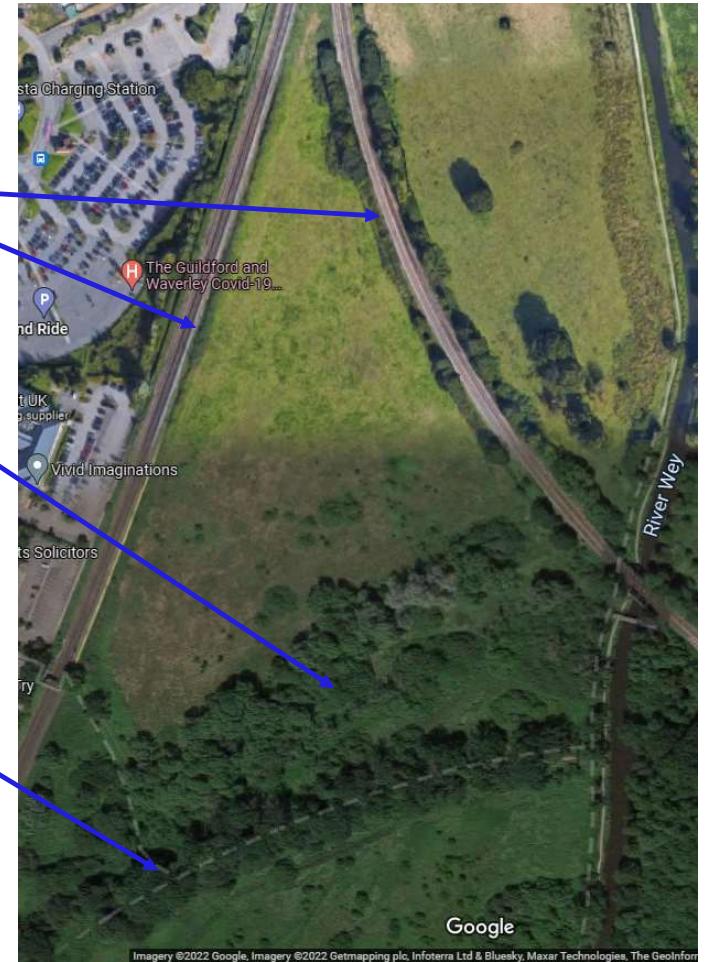
CSA Area 2



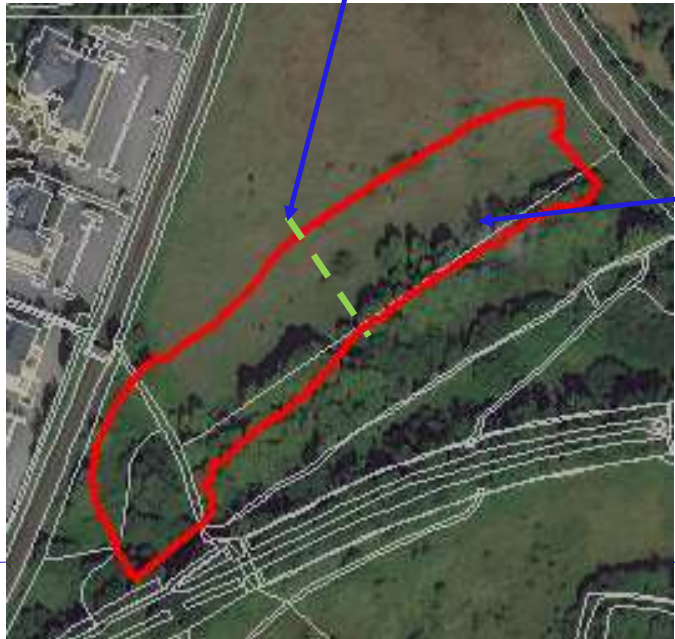
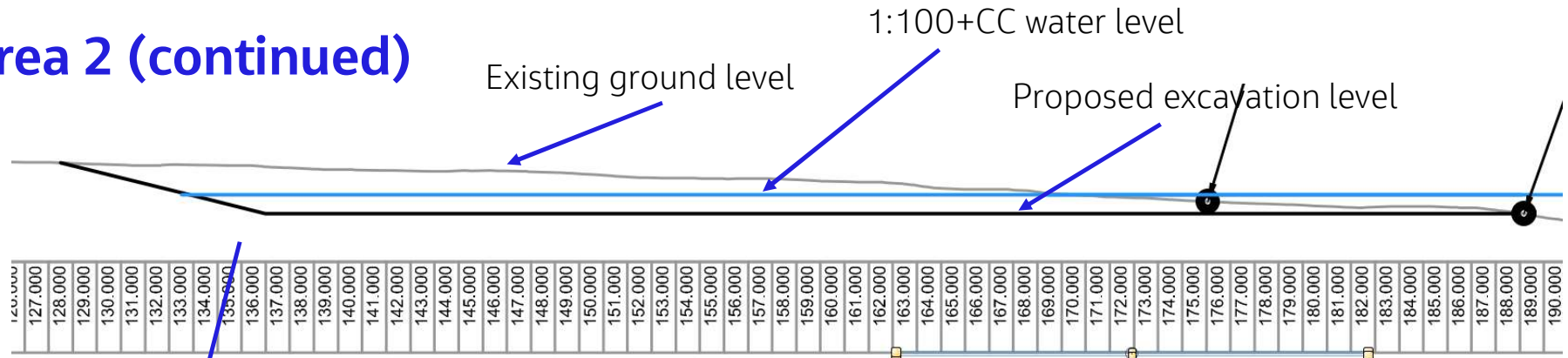
Railway

Existing vegetation
(trees)

Access limited, track
through dismantled
railway to south



CSA Area 2 (continued)



Initial excavation extent considered to minimise overburden excavation.

Potential to increase excavation extent north westwards to increase available volume.

Current extent leads to loss of trees

Access seems problematic

Volume available = 12,872m³

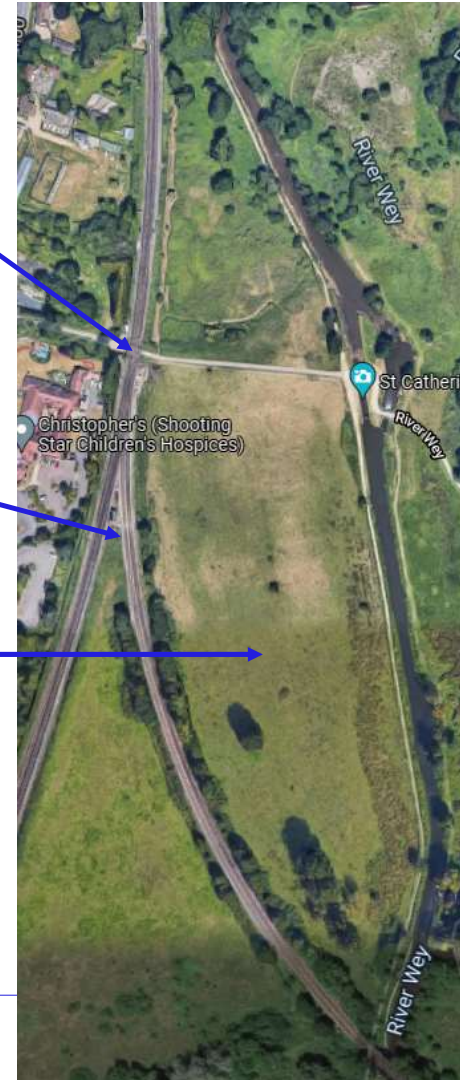
CSA Area 3



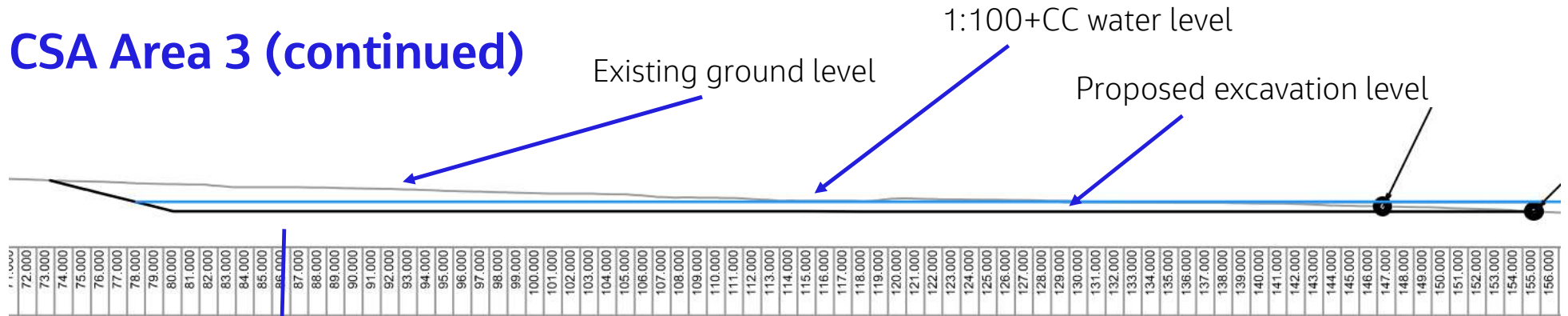
Access limited, track under railway to northwest

Railway

Limited existing vegetation (trees)



CSA Area 3 (continued)



Initial excavation extent considered to minimise overburden excavation.

Split to maintain access track to lock

Access seems problematic (beneath railway line, floating unlikely due to limiting clearance under downstream bridges)

Volume available = 16,100m³

CSA Area 4

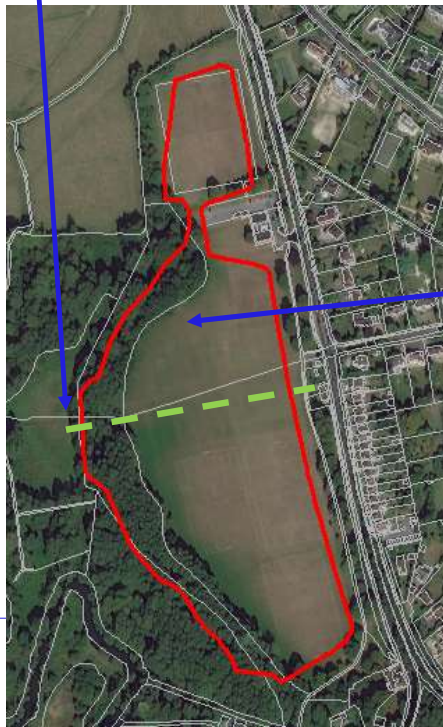
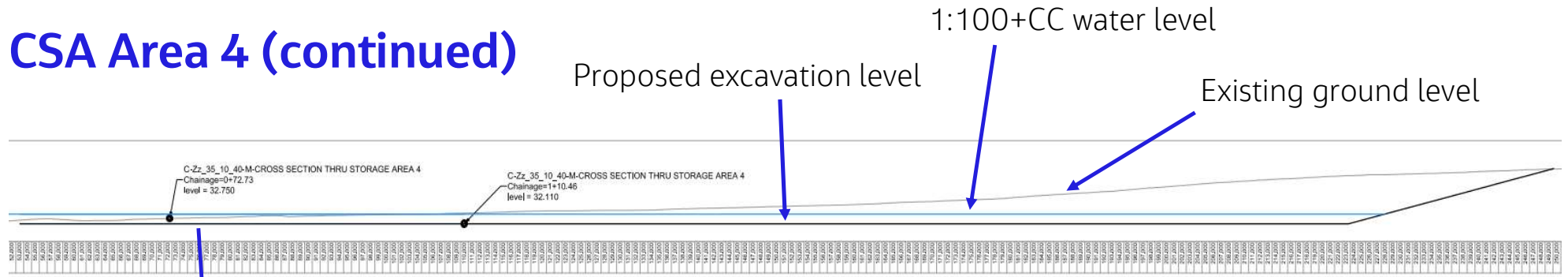


Existing vegetation (trees) but also large area of open space

Access available from road



CSA Area 4 (continued)



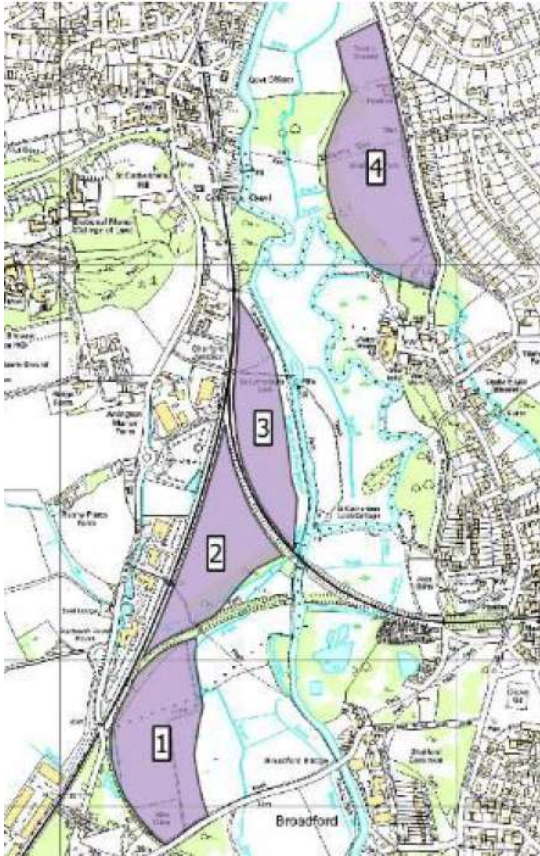
- Initial excavation extent considered, as closest to Guildford extent maximised for most storage volume
- Current extent leads to loss of trees, may need to be reduced
- Access seems easiest if all locations
- Volume available = 72,483m³

Environmental Constraints



- Northern part of Area 3 is in the Wey Valley Meadows SSSI
- Northern part of Area 3 should not be included
- Western side of Area 1 is in the Wey Valley Meadows SSSI
- Area of excavation shown for Area 1 needs to be revised to avoid SSSI

Compensatory Floodplain Storage Area Available Volumes Summary

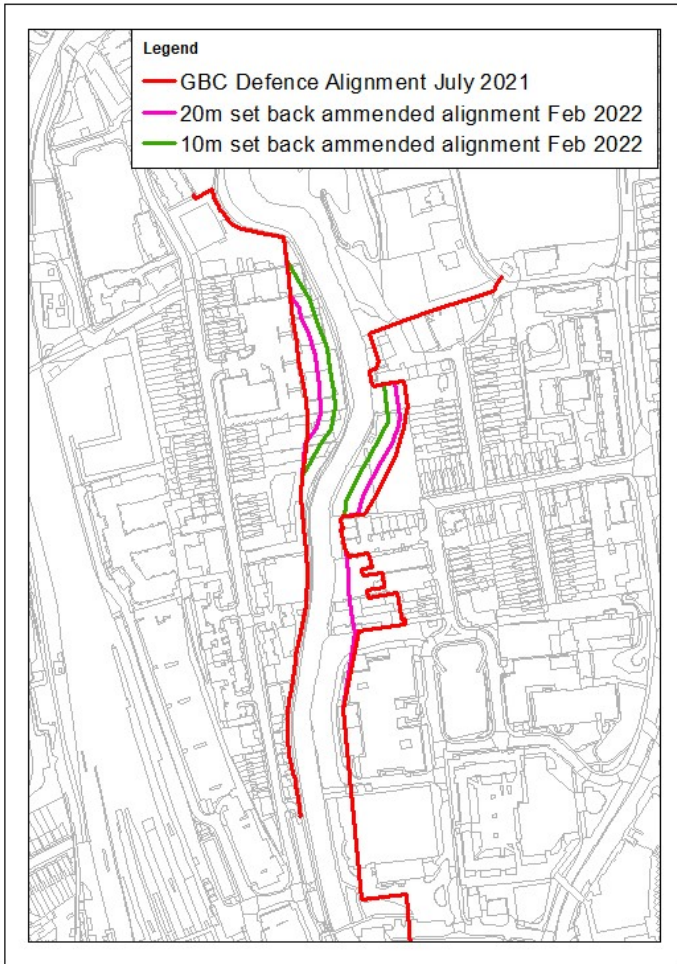


CSA Area	Volume of Storage available (m3)	Excess material excavation required (m3)
1) Left bank downstream of Broadford Bridge (A248)	22,387	21,048
2) Left bank between railway tracks and dismantled railway	12,872	7,507
3) Left bank downstream of railway bridge	16,100	8,201
4) Shalford Park, right bank adjacent to A281	72,483	72,069
Total	123,842	108,825

Floodplain Storage Analysis Conclusions and Recommendations

- Volume of lost floodplain for current alignment is 92,516m³
- Initial analysis suggests volume of storage lost can be delivered by CSAs
- CSAs have varied access and other constraints (vegetation and environmental designations)
- Areas 1 and 4 are least constrained and together based on initial analysis show combined volume of 94,870m³, however extent of proposed excavation in these areas needs to be refined

Flood Defence Alignment Refinement



- Current alignment has larger setbacks at Walnut Tree Close business park and Mary Rd/William Rd
- Possible need to be seen to not favour Bedford Wharf with lesser set backs
- Bedford Wharf set back ~20m
- Propose using pink 20m set back alignment (10m setback also shown)

Recommended Next Steps

- Refine flood defence alignment at Walnut Tree Close and Mary Rd/William Rd
- Reassess volume of floodplain storage lost for revised alignment
- Refinement of proposed land lowering in CSAs 1 and 4:
 - Area 4 reduce extent to avoid trees
 - Area 1 increase to compensate for reduction in size of Area 1 while retaining offset from railway and exclude area within SSSI
- Undertake hydraulic modelling of proposed CSAs to assess performance in offsetting increases in flood risk caused by proposed flood defence alignment (no guarantee proposed CSAs will successfully ensure no increase in upstream flood risk)

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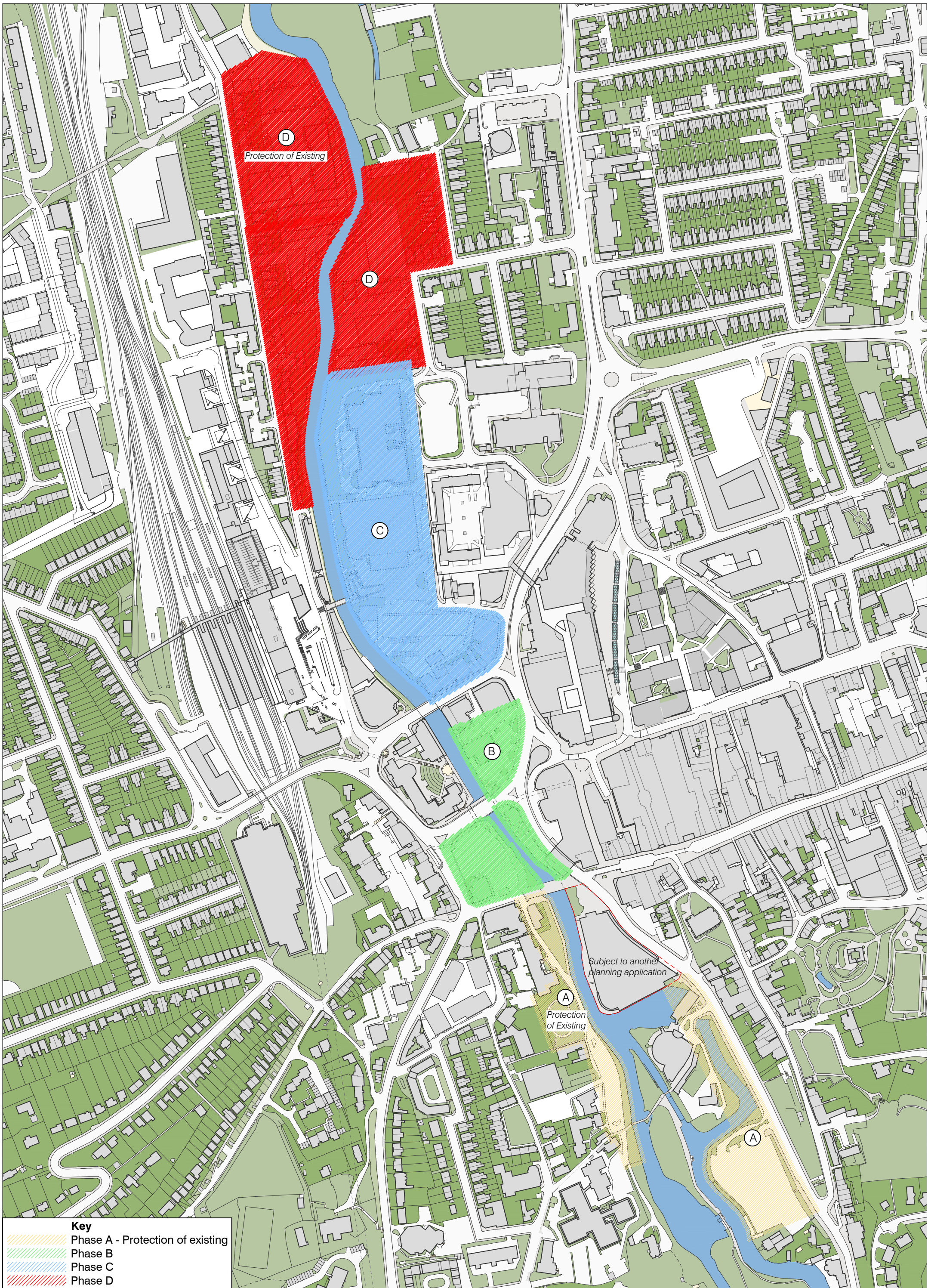


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Appendix C

Proposed Flood Defence Phasing



Key

- ▨ Phase A - Protection of existing
- ▨ Phase B
- ▨ Phase C
- ▨ Phase D

Appendix D

EA/GBC Meeting Notes

21/04/21

10/06/21

14/10/21

15/11/21

17/02/22

17/03/22

19/05/22

Guildford Flood Alleviation Scheme (FAS) & Guildford Economic Regeneration Programme. GBC/Arup and EA/Jacobs progress meeting notes

DATE: 20 April 2021

TIME: 2:00pm – 3:30pm

VIDEO CONFERENCING: Microsoft Teams

ATTENDEES:

Chair: Evie Kingsmill

Name		Role	Organisation
Andrew Tyldesley	AT	Major Projects - Town Centre Development Lead	Guildford Borough Council
Rebecca Fletcher	RF	Project Manager	Arup
Nigel Thompson	NT	Project Manager	Arup
Jon Mansbridge	JM	Funding and Benefits Realisation Manager	Environment Agency
Justine Glynn	JG	FRM Advisor	Environment Agency
Evie Kingsmill	EK	Partnership and Strategic Overview Team Leader	Environment Agency
Steve Archer	SA	Project Manager	Environment Agency
Ashley Wheeler	AW	Project Manager	Jacobs
Richard Stevens	RS	Principal FRM Specialist	Jacobs

Apologies			
Charlotte Hutchison	CH	Planning Specialist	Carter Jonas
Nick Taylor	NTa	Planning Specialist	Carter Jonas
Andrew Chalmers	AC	Project Manager	Arup
Gauri Desai	GD	Project Manager	Environment Agency

Meeting Objectives

1. EA/Jacobs provide update on modelling
2. GBC/Arup next steps

2 - Outstanding actions from 16 March 2021 meeting

- Actions addressed with the following carried over to the next meeting in May
 - GBC/Arup to:- A) Provide EA with GERP (when ready)
B) Provide EA with feedback on initial modelling / alignments
C) Give EA indication of timescales for the above

3 - Guildford FAS modelling progress and forward timeline – see presentation

- RS ran through the slides for the second iteration alignments.
- RS highlighted increased flooding upstream with all these alignments. At this stage even where the alignment was pulled back further from the river there wasn't a big reduction in upstream flooding.
- JM pointed out that the flood defence heights are key to integrating the defence into the redevelopment, so the further back they go, the lower and less intrusive they become.
- Compensatory storage area (CSA) will be needed to replace the 'lost' floodplain defended in the town centre. CSA has not been factored into the hydraulic model yet as this will be covered when the alignment is agreed with GBC (see 5 stage iterative approach). Shalford Meadows will be investigated to see if this is the best location for the 'lost floodplain' CSA.
- In addition, the throttling effect of defences along the river is causing increased flooding upstream so this will also need to be mitigated for by either pushing the defences further back or providing more CSA.
- RF would like more of the modelling information to help with their work. **Action:** RS to send RF GIS shape files
- AT thought that it would be really useful to see the effects of the CSA, defence height and setback integrated into the development
- RS asked about the Auction House and whether a defence needs to be built around it. AT wasn't sure so would check to see if this building will be retained. **Action:** AT to check status of the Auction House
- **Action:** GBC/Arup to investigate whether any further setback for the alignment possible and/or are there any locations where setback is not acceptable.

4 - Review of Millmead

- RS thought that Debenhams close to the river created a pinch point in Millmead
- Currently, the Millmead area has an increased risk of 10 – 25cm flooding due to the flood defences throttling flow downstream. Need to show no increase in flood risk to properties to progress the flood scheme and eventually get planning permission. **Action:** GBC/Arup to check the threshold level of the cottages, offices and Bonhams Auction House in Millmead opposite Debenhams. Are they vulnerable to internal flooding?
- AT keen to investigate other options that do not include a defence to reduce flooding at Millmead as the area is difficult to defend.
- Currently Millmead is not in Guildford FAS scope, due to Sponsor Group decision in 2018

5 - Progress with 5 stage approach



- SA referred to the 5 stage collaborative approach slide. He explained the modelling is still at stage 1. Feedback on the alignments from GBC and Arup is essential to move onto the next stage. RS thought that stages 2 and 4 could be condensed
- EK stated that the EA are currently going through the capital programme refresh, looking at bids for the next financial year and beyond.

6 - Guildford Economic Regeneration Programme (GERP) progress and forward timeline

- AT stated that the second iterations are valuable to see how it integrates with the Masterplan. Height of defence is key to how it fits into the architectural vision
- The GERP is currently going through the council review process in preparation for 25 May Executive Committee
- AT mentioned a review of traffic management in the town centre. GBC Highways are looking at 3 possible solutions as there is an aspiration for a 40% reduction in traffic through the town centre. The options are:-
 - H
 - Little C
 - Big C – this could involve closing the modern bridge over the Wey and rebuilding Town Bridge. Currently the bridge acts as a throttle so changing the design could have major impacts on flooding up and down stream. JM suggested Jacobs could model this for GBC to help decide which is the best option from a flood risk as well as highways perspective. JM expressed concern that flood risk and highways planning needs to be more integrated. AT explained that a decision on the traffic solution should be available after the 25 May Executive meeting.
- **Action:** AT to speak to the Highways team about the impact changing the bridge design could have to flood risk. Jacobs could add the preferred bridge design into a modelling run, to understand what impact a new bridge design would have on flood risk, especially at Millmead.
- AT mentioned a 20 – 30m set back on either side of the new bridge. Also, possible raising ground levels in the car park behind the High Street and raising Onslow Rd property thresholds
- JG asked if there are any other ground level changes on the horizon – GBC/Arup could not recall any other significant structures that would impact on flood risk. AT thought the only other structure is the Walnut Tree footbridge. Jacobs cannot progress with the modelling until they have information on structure and ground level changes. **Action:** GBC/Arups to confirm other ground level alterations and more details of those identified, that could impact on flooding

Next steps

- No further action on modelling until EA/Jacobs receive feedback from GBC/Arup. The Guildford FAS technical work is essentially in hiatus.
- EA/Jacobs awaiting feedback on alignments/solutions/GERP



Agreed actions

- **Action:** GBC/Arup to:- A) Provide EA with GERP (when ready)
B) Provide EA with feedback on initial modelling / alignments
C) Give EA indication of timescales for the above
- **Action:** RS to send RF GIS shape files
- **Action:** AT to check status of the Auction House
- **Action:** GBC/Arup to investigate whether any further setback for the alignment possible and/or are there any locations where setback is not acceptable?
- **Action:** GBC/Arup to check the threshold level of the cottages, offices and Bonhams Auction House in Millmead opposite Debenhams. Are they vulnerable to internal flooding?
- **Action:** AT to speak to the Highways team about the impact changing the bridge design could have to flood risk. Jacobs could add the preferred bridge design into a modelling run, to understand what impact a new bridge design would have on flood risk, especially at Millmead.
- **Action:** GBC/Arups to confirm other ground level alterations and more details of those identified, that could impact on flooding

Next meeting date 18 May 2 – 3.30pm Chair for next meeting Arup/GBC

Guildford Flood Alleviation Scheme (FAS) & Guildford Economic Regeneration Programme GBC/Arup and EA/Jacobs progress meeting NOTES

DATE: 10 June 2021

TIME: 15:00pm – 16:30pm

VIDEO CONFERENCING: Microsoft Teams

ATTENDEES:

Chair: Rebecca Fletcher (Arup)

Name		Role	Organisation
Andrew Tyldesley	AT	Major Projects – Town Centre Development Lead	Guildford Borough Council
Michael Lee-Dickson	ML-D	Regeneration Lead - Guildford Economic Regeneration Programme	Guildford Borough Council
Paul Dennison	PD	Director	Gleeds
Rebecca Fletcher	RF	Project Manager	Arup
Nigel Thompson	NT	Project Manager	Arup
Charlotte Hutchinson	CH	Planning Specialist	Carter Jonas
Evie Kingsmill	EK	Partnership and Strategic Overview Team Leader	Environment Agency
Jon Mansbridge	JM	Funding and Benefits Realisation Manager	Environment Agency
Justine Glynn	JG	FRM Advisor	Environment Agency
Steve Archer	SA	Project Manager	Environment Agency
Ashley Wheeler	AW	Project Manager	Jacobs
Richard Stevens	RS	Principal FRM Specialist	Jacobs
Mark Seward	MS	Project Director	Jacobs
Apologies			
Andrew Chalmers		Project Manager	Arup
Nick Taylor		Partner	Carter Jonas
Gauri Desai	GD	Project Manager	Environment Agency

Meeting Objectives

1. Update on GER Programme
2. Strategy for model iterations during masterplan development

1. Welcome		
1.1	Michael Lee-Dickson, GBC, joined the meeting to provide an update on the Guildford Economic Regeneration Programme project. Paul Dennison, GERP Programme Manager also joined	Note
2. Outstanding Actions from 20th April 2021		
2.1	GBC/Arup to: A) Provide EA with GERP when ready, B) provide EA with feedback on initial modelling/alignments, C) give EA indication of timescales. The GBC team presented the project to EA at a meeting on 11 th May 2021. Further questions/updates provided at this meeting (ref item 3). Feedback on alignment will be provided in due course when GBC team have started the next stage of the GERP project.	Note
2.2	GIS Shape files - Shapefiles were received 27/04/2021.	Note
2.3	Auction House Auction House is owned by GBC and leased to current occupier. AT pointed out the adjacent bridge is more likely to be a defining element.	Note
2.4	GBC/Arup to investigate whether further setback of the alignment is possible and/or if there are locations where setback is not possible. This will be investigated as GERP Stage 2 progresses	Arup to feedback after workshops with masterplan team.
2.5	GBC/Arup to check threshold levels of cottages, offices and Bonhams Auction House in Millmead opposite Debenhams This will be investigated as GERP Stage 2 progresses	
2.6	Impact of changing bridge design on flood risk Final solution for highways alignment has not yet been determined and will require updated traffic surveys which will not be available for some time. RF proposes to identify parameters that can be incorporated into the flood model and within which any future bridge will need to be designed.	Arup to liaise with Jacobs to identify what parameters need to be defined to enable the model to be run independently of bridge design
2.7	GBC/Arup to confirm other ground level alterations that could impact on flooding This will be investigated as GERP Stage 2 progresses	Arup to feedback after workshops with masterplan team.
3. Update from GBC on GER Programme		
3.1	ML-D Confirmed that at a meeting on 25 th May, the full Council Executive gave unanimous endorsement to the proposal for the Guildford Economic Regeneration Masterplan. ML-D proposes to issue the Executive Report, the Q&A briefing, Summary report, Masterplan and Flood Study to the EA team. It is noted that these documents are CONFIDENTIAL and it is requested they are not circulated beyond this team. SA agreed to act as point of contact to receive documents and distribute amongst EA team.	PD to issue reports to SA
3.2	ML-D would like to “reset” how GBC and EA move forwards together and proposes a “Terms of Reference” (ToR) is drawn up to set the principles of engagement, the objectives and the timescales for the project moving forward. GBC thanked EA for their patience whilst the first Stage of the GERP project was completed. JM pleased with the proposed reset that will result in a positive outcome for the joint projects. He is keen to run through the Stage 2 programme to ensure the appraisal for the Town Centre solutions is progressed in order to access varying funding pots and ensure Guildford BC doesn’t miss out on important sources of funding that a collaborative approach will attract. JG will collate comments from EA on ToR.	ML-D to prepare terms of reference for discussion JG to collate EA comments on proposed ToR
3.3	GBC to provide information on proposed GER programme to EA to ensure programmes are fully aligned	PD to issue GER programme
4 Availability of Baseline Model for Middle Wey		
4.1	Following discussion with RS, RF understands the Middle Wey model is currently being prepared for publication and should be available in August.	JG to issue updated middle

	JG – should hopefully be available before end of the month and will be issued to Arup.	Wey model to Arup when available
4.2	<p>JM questioned what Arup would do with model. AT stated that GBC need Arup to review model for due diligence. Arup also intend to undertake NFM study to ensure viable options have not been overlooked. JM Stated that a full review of NFM had already been carried out and shared with partners that concluded NFM could be potentially helpful for small scale local floods but would not reduce flood risk to allow Guildford’s proposed regeneration. All possible ways to manage flood risk within Guildford town centre have already been considered by Capita and Jacobs over a number of years. JM suggested a more efficient way forward would be for Arup to review the work carried out to date and highlight any concerns.</p> <p>JM suggested that this review is carried out alongside the formal start of the appraisal work to ensure the regeneration programme is not held up as a lot of work still needs to be undertaken to secure the funding and approvals to deliver the Guildford Flood Alleviation Scheme.</p>	<p>Note</p> <p>SA/Jacobs and RF to review what project information has already been shared and reviewed.</p>
5	Guildford FAS: Options Shortlist for Project Appraisal Stage	
5.1	<p>EK presented the paper issued in advance of the meeting. The paper set out the removal of upstream storage from the options shortlist and evidence to support this which have been discussed and agreed previously with GBC, SCC, the EA project team and the Project Board. The view was that the options listed in the paper continue to be agreed and the shortlist options should be taken forward to the appraisal stage. Paper needs ratification from the Sponsor Group to move forward.</p> <p><i>[Post meeting note: The paper will be reviewed by the Project Board then presented to the Sponsor Group meeting on 8th July]</i></p> <p>No other Options are being proposed at this stage (Options relate to SOP), it is the solutions for providing the integrated defence within the Town Centre that are being developed further.</p> <p>SA said that future EA appraisal work will assume a mix of solutions. Based on current info, this will be limited to 1. Permanent defence, 2. Temporary defence, 3. Bunds, 4. Landscaped areas, 5. River restoration</p> <p>All confirmed that the options appraisal short list had been agreed and the town centre defences will be developed through a mixture of the above solutions.</p>	<p>Arup to review paper and provide comments to JG by 19/06/21</p>
5.2	<p>For reference, the current Project Board comprises: GBC (Andrew Tyldesley) SCC (Doug Hill & George Rice) EA The Sponsor Group comprises: Funding partners (SCC/GBC/LEP) Interested parties (NT/TW) Councillors and Officers from GBC/SCC EA</p>	<p>JG to provide list of Project Board and Sponsor Group</p>
5.3	<p>As part of the formal appraisal process, the economically “preferred option” scheme will be identified. The previous draft Outline Business Case for Guildford Flood Alleviation Scheme identified the 1 in 50 Standard of Protection scheme as the nationally preferred economic option. As the regeneration scheme needs the 1 in 100 + cc SOP, partnership funding will be required for the cost difference between whatever the economically preferred option is and the local choice option that would support Guildford BC regeneration proposals</p> <p><i>[Post meeting note: The choice of preferred option now must also consider the sustainability of the options and the carbon footprint, this is now included on the option comparison table in the OBC.]</i></p> <p>The EA will prepare the outline and full business case for the FAS.</p>	<p>Note</p>

5.4	PD queried if the business case for the FAS takes into account the cost of relocating businesses etc. EA say yes, they have an estates lead who advises on that. The future Business Case will need to take this into account. The current Business Case is 'strategic', so does not include this level of detail.	Note
6	Strategy for developing flood defence model going forward	
6.1	<p>RF expects the masterplan team will want to investigate several variations of defence locations in certain areas. Between Arup and Jacobs we need to work out how best to pick these up and model them.</p> <p><i>[Post meeting note: This relates to Jacobs forthcoming appraisal scope, under the EA framework. The scope will be based on a Target Cost contract – as such, the scope needs to be robust and needs to allow for a limited number of iterations. Also need feedback from Arup / GBC on proposed alignments. Otherwise, too much risk of abortive works.]</i></p> <p>RS stated it is relatively easy to amend the wall alignment but changes to ground levels will be more difficult. There can't be an unlimited number of changes.</p>	Arup & Jacobs to have technical discussion as to how to pick up defence line variations in model
6.2	<p>JM stated that as ML-D pointed out at the start of the meeting the biggest constraint on the regeneration of Guildford town centre is flood risk. Therefore it is critical that the flood risk constraint is mitigated through the development of the flood alleviation scheme and the alignment that will best mitigate this constraint is identified. As a partnership we can then look to see how the master plan can be developed to benefit from this protection and fine tune the defence alignment if required. This will be the most cost effective approach for the partnership. If the master plan is developed in isolation you could end up with a regeneration master plan that can't be protected to an acceptable level without increasing flood risk elsewhere that wouldn't be acceptable and therefore not deliverable.</p> <p><i>[Post meeting note: Phasing of flood defences will be a key aspect of this scheme. Additional temporary defences and associated deployment arrangements may be required following the installation of the first phases of permanent defences to ensure flood risk is not increased to any properties while the full flood alleviation scheme is constructed over time. This needs to be kept in mind throughout the process and would be good to be acknowledged in the strategy.]</i></p> <p>JM stated that installing flood defences piecemeal is likely to be problematic. Whilst this approach would protect certain properties, it would transfer flood risk elsewhere.</p>	
7	AOB	
	<ul style="list-style-type: none"> Meeting format – JG suggests this format is retained as a good way of keeping team up to date on progress 	JG/RF to identify suitable dates for next meetings.

Post meeting note

The formal Guildford Flood Alleviation Scheme appraisal should be scoped out with Jacobs and in consultation with Guildford BC. Once scope and target price has been agreed the appraisal funding agreement will be agreed between the Environment Agency and Guildford Borough Council.

Guildford Flood Alleviation Scheme (FAS) & Guildford Economic Regeneration Programme GBC/Arup and EA/Jacobs progress meeting Notes

DATE: 14 October 2021

TIME: 2:00pm – 3:00pm

VIDEO CONFERENCING: Microsoft Teams

ATTENDEES:

Chair: Rebecca Fletcher

Name		Role	Organisation
Michael Lee-Dickson	ML-D	Regeneration Lead	Guildford Borough Council
Paul Dennison	PD	Project Manager	GERP – Gleeds
Rebecca Fletcher	RF	Project Manager	Arup
Cameron Black	CB	Project Engineer	Arup
Jon Mansbridge	JM	Funding and Benefits Realisation Manager	Environment Agency
Justine Glynn	JG	FRM Advisor	Environment Agency
Ivan Parr	IP	Partnership and Strategic Overview Team Leader	Environment Agency
Steve Archer	SA	Project Manager	Environment Agency
Gauri Desai	GD	Project Manager	Environment Agency
Samantha Fowler	SF	Project Manager	Jacobs
Richard Stevens	RS	Associate Director	Jacobs
Charlotte Hutchison	CH	Planning Specialist	Carter Jonas
Cllr John Rigg	JR	Lead Councillor for Regeneration	Guildford Borough Council

Meeting Objectives

1. Discuss alternative alignment proposals
2. Align FAS and GERP programmes

1. Welcome		
1.1	Samantha Fowler introduced as Jacob's new Project Manager	Note
2. Outstanding Actions from 9th August 2021		
2.1	<p>4.1 JM to get clarification from EA Head Office on the definition of 'Critical Infrastructure' – <i>no further definition available, use Flood Risk Vulnerability classification in NPPF for Essential Infrastructure:</i></p> <ul style="list-style-type: none"> • Essential transport infrastructure (including mass evacuation routes) which has to cross the area at risk. • Essential utility infrastructure which has to be located in a flood risk area for operational reasons, including electricity generating power stations and grid and primary substations; and water treatment works that need to remain operational in times of flood. • Wind turbines. <p>5: Town Bridge – RF to set up meeting with Jacobs to discuss</p> <p>6: Programme – EA programme has been provided</p> <p>7: Programme workshop – agreed to hold a programme/phasing workshop in due course Agreed this workshop will be after the next iteration of hydraulic modelling.</p>	Note RF to set up meeting with Jacobs
3. GER Proposed Alignment review		
3.1	<p>Current proposed alignment submitted to EA by GER (27 Sep) was discussed in a previous meeting (6 Oct). Concern about how modelling will be impacted by Town Bridge and changes to current cross section in the model.</p> <p>EA also concerned that the updated alignment remains too close to the river. EA previous comment was '<i>for the defences to work hydraulically, we need to be looking at opportunities to set back further</i>'</p> <p>A number of variables need to be considered in the model:</p> <ul style="list-style-type: none"> • Maximise regeneration land • Minimise effect on traffic routes • No increase in flood risk in other areas both upstream and downstream <p>Next model to have a Millmead defence line, compensatory flood storage and town bridge cross section area (both bridge scenarios). This requires a review of volume of floodplain lost with current defence alignment and available locations for compensatory flood storage upstream of Guildford to inform modelling.</p>	Notes
4. EA Modelling Considerations		
4.1	<p>Town Bridge: Three possible scenarios to consider: Existing bridge with existing cross sectional area</p> <ul style="list-style-type: none"> • New bridge with same deck level as existing bridge and same cross sectional area (no change in hydraulic modelling) • New bridge with greater cross-sectional area below bridge (if capacity is required) 	RF to set up meeting with Jacobs to discuss cross sections to model
4.2	<p>GER Matrix: Review of flood defence options matrix produced as part of Stage 1 report. Matrix included a number of potential solutions that are not now being considered. Arup will review and recirculate matrix showing a few options per location only.</p>	Arup to circulate matrix
5. GBC/EA terms of reference		
5.1	To be discussed off line	
6. Programme and Phasing		
6.1	Current GBC programme that people should now be working to will be circulated.	PD
6.2	<p>Visualisation of phasing proposals to be circulated for discussion.</p> <p>GBC would like to understand from the EA if there are any priority/existing areas of flood risk that require solutions that have been identified for future regeneration.</p> <p>All parties acknowledge there may be a hybrid of temporary/permanent solutions required in some locations to enable regeneration.</p> <p>Generally GBC regeneration sequence runs south to north.</p> <p>EA priorities (to protect properties) are in the north. esp. Mary Road/William Rd and Walnut Tree Close.</p> <p>Agreed there would be benefit in sitting together with sustainable places team, planners and GBC to mark up a set of plans when the next iteration of modelling has been completed and flood defence line is more refined. Also need a meeting to discuss planning strategy before marking up plans with potential alignments</p>	PD

7. AOB		
7.1	Assumptions spreadsheet – JG to return comments on the assumptions to GBC next week	JG
7.2	<p>Next meeting 18th November 4pm. Meetings to be held monthly, next 6 months to be scheduled <i>PMN – Next meetings scheduled as follows:</i></p> <ul style="list-style-type: none"> • 18th November 16:00 – 17:00 • 16th December 14:00 – 15:00 • 20th January 2022 14:00 – 15:00 • 17th February 14:00 – 15:00 • 17th March 14:00 – 15:00 • 21st April 14:00 – 15:00 • 19th May 14:00 – 15:00 	JG to suggest dates

Guildford Flood Alleviation Scheme (FAS) & Guildford Economic Regeneration Programme GBC/Arup and EA/Jacobs progress meeting Meeting notes

DATE: 15 November 2021

TIME: 4 - 5pm

VIDEO CONFERENCING: Microsoft Teams

ATTENDEES:

Chair: Ivan Parr

Name		Role	Organisation
John Rigg	JR	Chair of Sponsor Group Lead Councillor for Regeneration	Guildford Borough Council (GBC)
Michael Lee-Dickson	MLD	Regeneration Lead	GERP – GBC
Paul Dennison	PD	Project Manager	GERP – Gleeds
Rebecca Fletcher	RF	Project Manager	Arup
Cameron Black	CB	Project Manager	Arup
Jon Mansbridge	JM	Funding and Benefits Realisation Manager	Environment Agency
Justine Glynn	JG	FRM Advisor	Environment Agency
Ivan Parr	IP	Partnership and Strategic Overview Team Leader	Environment Agency
Steve Archer	SA	Project Manager	Environment Agency
John Hadley	JH	Project Manager	Environment Agency
Sam Fowler	SF	Project Manager	Jacobs
Richard Stevens	RS	Associate Director	Jacobs
Nick Taylor	NT	Planning	Carter Jonas

APOLOGIES

Gauri Desai	GD	Project Manager	Environment Agency
Charlotte Hutchison	CH	Planning	Carter Jonas

Meeting notes

2. Outstanding actions from 14th October 2021 meeting

- RF to send RS an idealised x-section of Town Bridge and then set up a meeting to discuss
- MLD to organise a meeting for GBC, GERP and EA planners asap

3. EA comments on GERP – Flood defence options report (Arup matrix)

- EA and Jacobs generally welcomed the reduction of options. Specific comments:-
 - 1.1 – where possible defence walls to be integrated into the development
 - 1.2 - RF confirmed the landscaping for the defence compared to a wall would not reduce capacity on the 'wet' side of the defence.
 - 1.3 – The design of river fronting developments (particularly for floodable undercrofts) is a planning matter to be resolved with GBC, GERP and EA planners
 - 1.5–Temporary barriers currently provide protection up to 1:30 SoP. Barriers may also be needed for gaps in defences and as flood gates
 - 1.7– NFM on its own will not reduce peak water levels for the town centre so will not be taken forward by EA/Jacobs. RF thought there could be opportunities for Biodiversity Net Gain so consideration may be given to NFM schemes in some locations by GBC
- RF would review EA/Jacobs comments and amend where necessary

4 - Modelling & alignment

- RS to calculate the amount of 1:100+cc CSA (compensatory storage area) required for the 30/9 GBC alignment. PD asked when this would be available. MS thought it could be ready in a month but would have a better idea in a couple of weeks. As the next progress meeting is scheduled for 16 December, JG to pencil in a meeting for early January in case it's needed.

5 – Next steps

- Agreed Actions
 - RF to send RS an idealised x-section of Town Bridge and then set up a meeting to discuss
 - MLD to organise a meeting for GBC, GERP and EA planners asap
 - JG to send PD and MLD examples of successful city regeneration with flood alleviation schemes
- Next meeting is on 16 December 2 – 3pm. Rebecca to chair. Meeting may be postponed until early January 2022 if CSA results are not ready in time. [Post meeting note: 16 December meeting cancelled – JG to rearrange meeting date when CSA results are ready]

6 - AOB

- PD and SA meeting week starting 22 Nov to discuss project phasing

Guildford Flood Alleviation Scheme (FAS) & Shaping Guildford's Future

GBC/Arup and EA/Jacobs progress meeting notes

DATE: 17 February 2022

TIME: 2 – 3pm

VIDEO CONFERENCING: Microsoft Teams

ATTENDEES:

Chair: Jon Mansbridge

Name		Role	Organisation
Michael Lee-Dickson	MLD	Regeneration Lead	GERP – GBC
Paul Dennison	PD	Project Manager	GERP – Gleeds
Rebecca Fletcher	RF	Project Manager	Arup
Jon Mansbridge	JM	Funding and Benefits Realisation Manager	Environment Agency
Justine Glynn	JG	FRM Advisor	Environment Agency
Ivan Parr	IP	Partnership and Strategic Overview Team Leader	Environment Agency
Steve Archer	SA	Project Manager	Environment Agency
John Hadley	JH	Project Manager	Environment Agency
Sam Fowler	SF	Project Manager	Jacobs
Richard Stevens	RS	Associate Director	Jacobs
Nick Taylor	NT	Planning	Carter Jonas

APOLOGIES:

John Rigg	JR	Chair of Sponsor Group Lead Councillor for Regeneration	Guildford Borough Council (GBC)
Cameron Black	CB	Project Manager	Arup
Charlotte Hutchison	CH	Planning	Carter Jonas

MEETING NOTES

1 - Outstanding actions from 15 November 2021 meeting

- RF and PD confirmed no change to Town Bridge original profile will be made as any required changes for improved highways or active travel will ensure the bridge design will also maintain existing flow capacity.
- Planning meeting held on 14 February
- Examples of successful city regeneration with a flood scheme issued

2 - Update from 14 February GBC/EA planning meeting

- Meeting discussed EA, GBC and SGF planners working together on a spatial planning strategy for regeneration and the FAS. A developers' forum was suggested as a way of bringing other landowners on board.

3 - Surface water report – next steps

- Jacobs surface water report sent out with the agenda. EA want to work with partners to achieve the aspirations to reduce surface water flooding
- PD set out a 2 stage approach:- first to maintain the status quo with the second, collaborative with SCC to see if their wider aspirations can be met, **Action:** PD to forward SW report to Aecom (SGF's drainage consultant) and set up a meeting with SCC, JG, SA, RS and Aecom.
- RS highlighted the issue of the flood defence could block sw flow routes back to the river. Several potential attenuation sites further upstream in the SW catchment identified in the report

4 - EA & SGF programme

- SA outlined the EA and SGF's programme discussions. Both FAS and SGF's programmes aligned up to the FAS start of construction to 2025, however SGF programme 2025 – 2030. Need to make sure areas alleviated do not increase flood risk elsewhere.
- PD proposed zoning development and constructing the defence in sequence.
 - Compensatory storage areas (CSA) first
 - Followed by defending existing residential properties
 - Then infilling zones from south to north
- PD to discuss this with GBC planning policy next week

5 – CSA analysis for Guildford town centre and Flood Defence Alignment Refinement

- RS ran through the presentation – see attached
- RS confirmed the courts are outside the floodplain as they sit on higher ground
- PD wondered if the Debenhams site is also outside the floodplain. JM clarified the basement still currently floods from the east so there is still the need to identify the flood plain loss.
- PD wanted clarification on the set back of development from the river. JM stated that 10m has always been the minimum set back in discussions with GBC and developers. JM thought GBC may have adopted this policy in their Development Management Plan. **Action:** NT to check
- PD to review the alignments shown on slide 16 to see if any adjustments could be made to reduce the CSA volume. **Action:** PD to send alignment tweaks to JG & SA before next progress meeting on 17 March
- RS explained the CSA volumes were calculated for the 1:100 with climate change standard of protection
- JM thought GBC owned the playing fields in CSA area 4. **Action:** MLD to check with GBC to confirm ownership and to see if flooding this open space is acceptable for GBC (Hendryk?)
- **Action:** SA send a copy of the slides but asked that they are not shared due to the sensitive nature of the information.

AOB

- PD has reviewed examples where the EA have worked with councils on regeneration projects and would like to understand how the EA managed the sequential test discussion. **Action:** JM to ask Veronica James (EA planner) to contact planning colleagues to find out how they worked with the LPA on the sequential test

Actions:

- PD to forward SW report to Aecom (SGF's drainage consultant) and set up a meeting with SCC, JG, SA, RS and Aecom
- NT to check if GBC have a development management policy setting back development from the river
- PD to send alignment tweaks to JG & SA before next progress meeting on 17 March
- MLD to check with GBC to confirm ownership of CSA area 4 and to see if flooding this open space is acceptable for GBC (Hendryk?)
- JM to ask Veronica James (EA planner) to contact planning colleagues to find out how they worked with the LPA on the sequential test

Next meeting 17 March 2022 at 2pm

Guildford Flood Alleviation Scheme (FAS) & Shaping Guildford's Future

GBC/Arup and EA/Jacobs progress meeting notes

DATE: 17 March 2022

TIME: 2 – 3pm

VIDEO CONFERENCING: Microsoft Teams

ATTENDEES:

Chair: Rebecca Fletcher

Name		Role	Organisation
John Rigg	JR	Lead Councillor for Regeneration	Guildford Borough Council (GBC)
Michael Lee-Dickson	MLD	Regeneration Lead	GBC
Paul Dennison	PD	Project Manager	Gleeds
Rebecca Fletcher	RF	Project Manager	Arup
Cameron Black	CB	Project Engineer	Arup
Jon Mansbridge	JM	Funding and Benefits Realisation Manager	Environment Agency
Justine Glynn	JG	FRM Advisor	Environment Agency
Ivan Parr	IP	Partnership and Strategic Overview Team Leader	Environment Agency
Steve Archer	SA	Project Manager	Environment Agency
John Hadley	JH	Project Manager	Environment Agency
Richard Stevens	RS	Associate Director	Jacobs

APOLOGIES:

Sam Fowler	SF	Project Manager	Jacobs
Nick Taylor	NT	Planning	Carter Jonas
Charlotte Hutchison	CH	Planning	Carter Jonas

MEETING NOTES

1 - Outstanding actions from 17 February 2022 meeting

- Surface water report has been issued to AECOM with follow up meeting scheduled for 18/03/22. After this internal meeting, PD to organise a surface water meeting to include EA/Jacobs/Thames Water/SCC/AECOM. Need to agree requirements in the appraisal scope
- NT to check if GBC have a development management policy setting back development from the river
- GBC undertaking land ownership review of CSA areas, title reports update expected w/c 21/03/22
- JM to ask Veronica James (EA planner) to contact planning colleagues to find out how they worked with the LPA on the sequential test

2 – SGF Proposed Phasing

- PD presented the proposed phasing issued via email 15/03/22.
 - 4 phases identified. Phasing assumes that compensatory flood storage areas are delivered in advance.

- Phase A: Protection of existing properties - Millmead in the south and Walnut Tree Close/Riverside Business Centre/Mary Road/William Road in the north
- Phase B: Millbrook Car park and Millbrook
- Phase C: Town Wharf area
- Phase D: Bedford Wharf area
- Initial comments:
 - Phasing needs to be modelled with CSAs to make sure there is no increase in flood risk
 - Connection between northerly Phase A and Phase D (Bedford Wharf) need to be investigated – potential for defences in Phase A to have negative impact on Bedford Wharf in short term. RS mentioned that Phase A likely to transfer flood risk to other locations (Bedford Wharf, etc) as the throttling effect would move water elsewhere
 - Millbrook defences may need to be installed at same time as Millmead to ensure water is not displaced to Millbrook.
 - A masterplan will make assessing sites in the town centre much easier.
 - PD mentioned the Debenhams site needs to be developed quickly as it is a key site
- EA/Jacobs will review and aim to provide high level comments. Target 25/03/2022. Meaningful feedback likely to take longer as this will need hydraulic modelling work. Feedback/outputs likely to form part of next round of hydraulic modelling (depends on the alignment decisions).
- From planning point of view – The planning application will have to cover the complete Flood Alleviation Scheme i.e. linking the defences with the compensatory flood storage area(s). In order for regeneration to be permitted in current flood risk areas, the planning authority need to know that planning permission and the other approvals are in place for the Guildford Flood Alleviation Scheme before they can consider the benefits it will provide to the regeneration sites and their associated planning applications. They will also need the policy support from the proposed Area Action Plan and in the longer term would benefit from a refresh of the local plan. Post approval of the Guildford Flood Alleviation Scheme we would expect regeneration sites to have Grampian planning condition attached to their planning permission to ensure the Guildford Flood Alleviation scheme is in place prior to occupation of any regeneration site.

3 – SGF Alignment tweaks

- Zone A1 - north of civic courts. GBC have no land holdings in this area and therefore masterplan proposal is for a movement corridor along the river only. Therefore, suggest original alignment is adopted.
- Town Wharf – GBC working assumption is that the key criteria for the defence alignment is to maintain the width between defences on east and west bank – ie any proposed changes on east bank need to be reflected on west bank taking into ground levels etc.
 - IP noted previous discussion with National Trust requested more substantial set back – details of these discussions to be shared with GBC team
- Millmead – GBC note proposed alignment is against building frontages but will need to allow for access to buildings etc. Therefore propose to incorporate defence into the public realm which may push it closer to the river.
- JM suggests GBC send through a plan with proposed changes and thinking behind the proposals and workshop is arranged to review.

4 – Compensatory Storage Areas

- No update as provided at the last meeting. The next update will depend on the agreed revised alignment

Actions:

- EA/Jacobs will review and aim to provide high level comments. Target 25/03/2022.
- GBC to send proposed alignment tweak markup to EA/Jacobs with thinking behind proposals. Workshop to be arranged.
- IP to send 2019 workshop notes

Next meeting 14 April 2022 at 2pm

Guildford Flood Alleviation Scheme (FAS) & Shaping Guildford's Future (SGF)

GBC/Arup and EA/Jacobs progress meeting

Meeting notes

DATE: 19 May 2022

TIME: 2:00pm – 3:00pm

VIDEO CONFERENCING: Microsoft Teams

ATTENDEES: Chair: Ivan Parr

Name		Role	Organisation
John Rigg	JR	Chair of sponsor group, Lead Councillor for Regeneration	Guildford Borough Council
Michael Lee-Dickson	MLD	Regeneration Lead	Guildford Borough Council
Paul Dennison	PD	Project Manager	Gleeds
Rebecca Fletcher	RF	Project Manager	Arup
Jon Mansbridge	JM	Funding and Benefits Realisation Manager	Environment Agency
Justine Glynn	JG	FRM Advisor	Environment Agency
Ivan Parr	IP	Partnership and Strategic Overview Team Leader	Environment Agency
Steve Archer	SA	Project Manager	Environment Agency
John Hadley	JH	Project Manager	Environment Agency
Sam Fowler	SF	Project Manager	Jacobs
Charlotte Hutchison	CH	Planning Specialist	Carter Jonas

Apologies

Nick Taylor	NT	Planning Specialist	Carter Jonas
Richard Stevens	RS	Principal FRM Specialist	Jacobs

1 - Welcome and outstanding actions from 17th March meeting

- IP to send out notes from 21 January 2019 workshop
- GBC undertaking land ownership review of CSA areas

2 & 3 - Update to the proposed alignment plan taking into account SGF feedback and initial review of SGF phasing proposals

- Meeting to be arranged early June with EA/Jacobs GBC/SGF/Arup to discuss alignment and phasing. **Action: JG set up meeting**

4 - Guildford FAS/SGF latest scope (issued before 19 May)

- **Action: GBC comments to EA by 31 May**
- SA mentioned the importance of everyone buying into the scope. Now is the time to make sure the scope right. Once the contract is awarded, scope changes may be costly and result in project delays.
- SA explained the scope just covers the appraisal stage (the next 18 -20 months). The scope will consider a maximum of 3 iterations to reach an EA/GBC agreed alignment. Agreeing the preferred

option before detailed design can be progressed is essential – this should take us through to around December 2023. [Post meeting note: Project update – the latest programme shows September 2022 for Contract Award. Assuming 20 months for the appraisal, detailed design should be April 2024 rather than Dec 2023].

5 - Progress setting up Developers' Forum, legal agreements and setting up a board

- JR thought delivery of the scheme will be assisted if all the affected properties are owned by GBC – many are already owned by the council. GBC could approach landowners for key sites to acquire. GBC legal are concerned about blight when the flood defence alignment is announced. IP thought the alignment could either limit or enhance development potential - a fine line between the two so messaging is important.
- JM wondered when we would have information that could be shared with interested parties – including land acquisition.
- JM explained the process needs to be transparent and fair to all landowners and developers affected by the FAS.
- MLD agreed a developers' forum should be set up but need to understand the legal implications. A separate session to understand the learning from other regeneration projects ie Derby would help with this process. **Action: JM/JG/MLD to investigate setting up a meeting with Derby City Council June/July**
- MLD explained that once the legal agreement has been signed and the financial commitment made then and EA/GBC/SGF joint board can be set up.
- **Action: JG/IP to circulate draft objectives for comment. Also, review a governance structure for the joint working arrangement and share with MLD**
- JR thought we should start engaging asap and expected the latest plans to be submitted to the Council Executive meeting July 2022 for approval.

6 - Feedback and setting-up a meeting to discuss surface water

- PD stated that Aecom are developing concepts and have met SCC. Aecom have been looking at SuDS opportunities on the 'dry' side – but also recognising there could also be opportunities on the 'wet' side of defences. PD would like SuDS to pick up existing SW flooding problems and resolve. A technical note to be circulated over the next 10 days. **Action: PD to forward technical note to SA/JG to circulate to EA/Jacobs.** The FAS must not worsen surface water flooding but look for improvements. George Rice & Doug Hill are the SCC contacts
- SA would like SCC and GBC/SGF comments on Jacobs SW report on issued January 2022 and EA. Feedback is important for the scope to ensure we have a robust contract to award. **Action: GBC/SGF to send SA feedback on any additional SW requirements not identified in Jacobs SW report to include in appraisal**

Actions

- JG set up alignment and phasing meeting
- GBC comments on scope to EA by 31 May
- JM/JG/MLD to investigate setting up a meeting with Derby City Council June/July
- JG/IP to circulate draft objectives for comment. Also, review a governance structure for the joint working arrangement and share with MLD
- PD to forward Aecom technical note to SA/JG to circulate to EA/Jacobs
- GBC/SGF to send SA feedback on any additional SW requirements not identified in Jacobs SW report to include in appraisal

