

Wimbledon Park Lake – Reservoir Safety Project

Overview Presentation to Ward Councillors

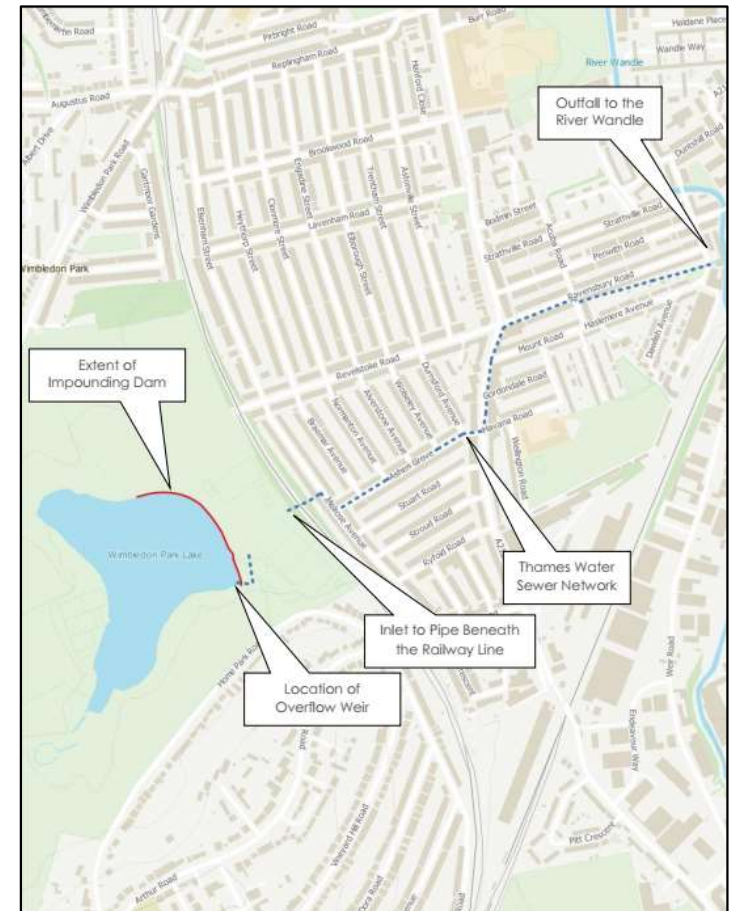
9th December 2020



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Design Progress to Date

- Taken forward and reviewed Merton’s previous background work (surveys, reports, options appraisals, etc.) since 2017
- Reviewed information provided by stakeholders and community groups
- Engaged a number of specialist consultants to undertake additional surveys and prepare appraisal
- Engaged an independent historic landscapes consultant
- Engaged landscape architects
- Undertook hydrological assessment for 1:10,000 and PMF
- Optioneered various solutions with consideration of the varying constraints associated with this project
- Commenced hydraulic design for spillway and associated protective measures
- Prepared site layout, general arrangement and sectional drawings



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Existing Arrangement



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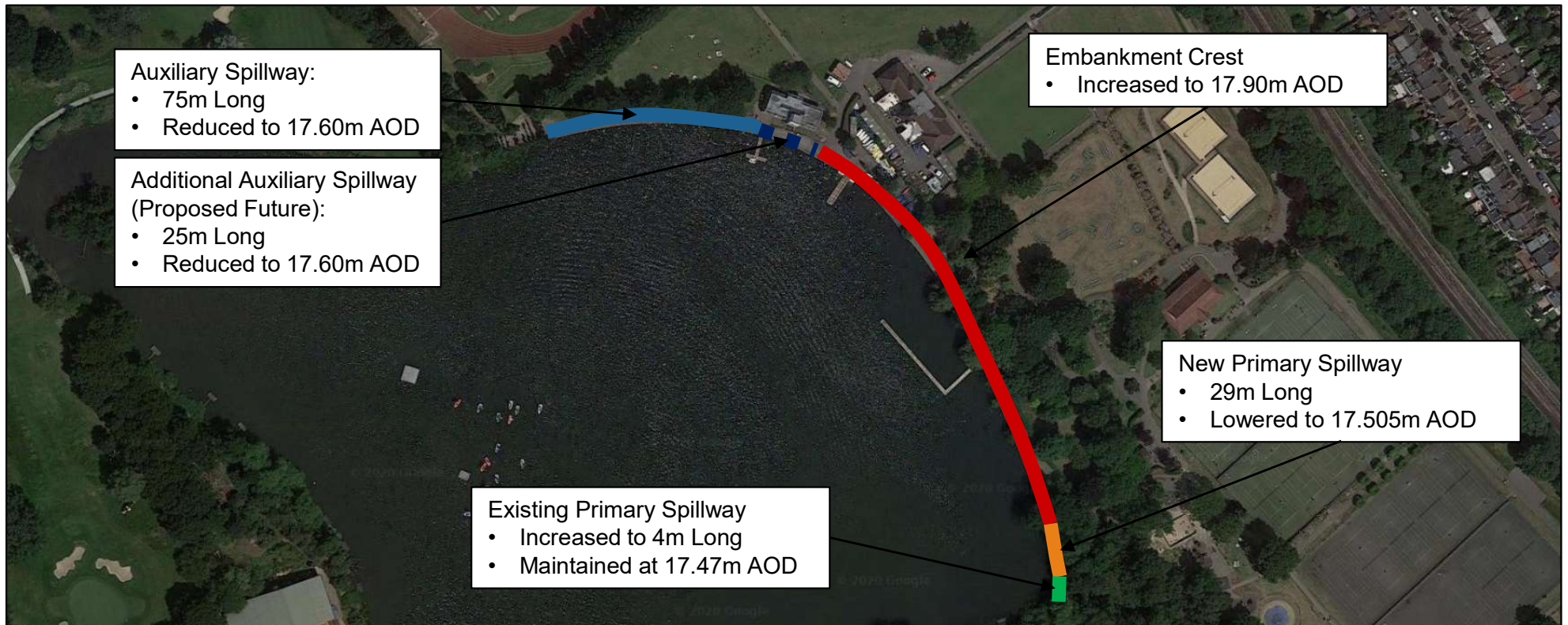
Existing Arrangement

- Existing Primary outfall is a 0.7m wide concrete stepped channel
- Controlled by a 1.3m wide weir set at 17.47m AOD (230mm below crest of dam)
- 100mm dia pipe controlled by sluice valve located adjacent to spillway to allow drain down of lake
- Flows discharge to a pond in Ashen Grove Wood
- 450mm diameter culvert conveys flows in a Northerly direction
- Discharges to a series of open channels and culverts before passing through a 1.0m diameter culvert under the rail line
- Secondary 100mm dia pipe located near centre of dam and feeds the ornamental Waterfall Gardens
- Currently no Auxiliary Spillway



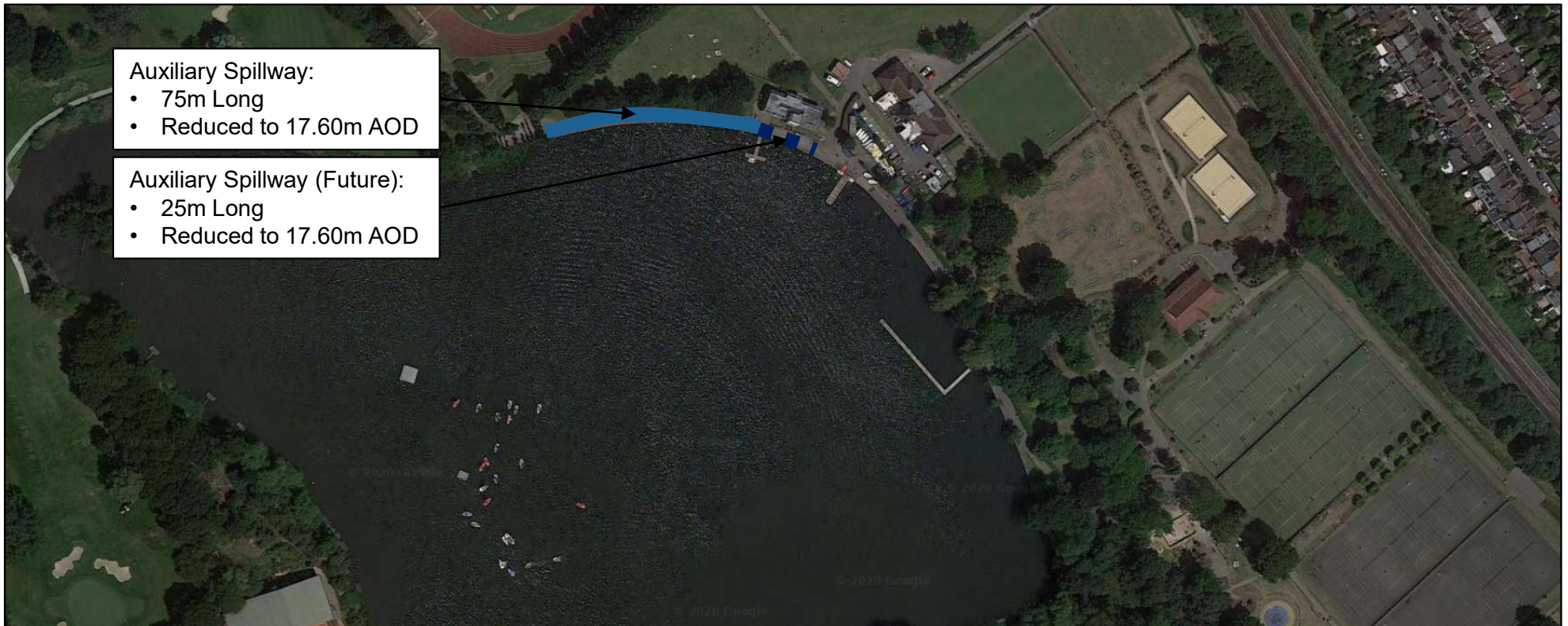
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Outline Design – Overview



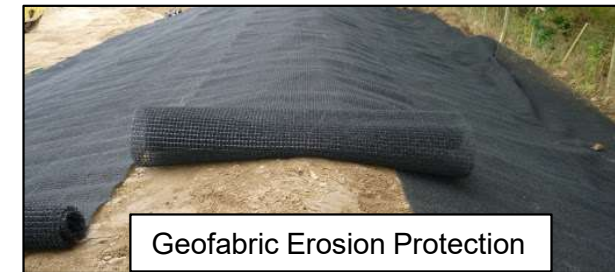
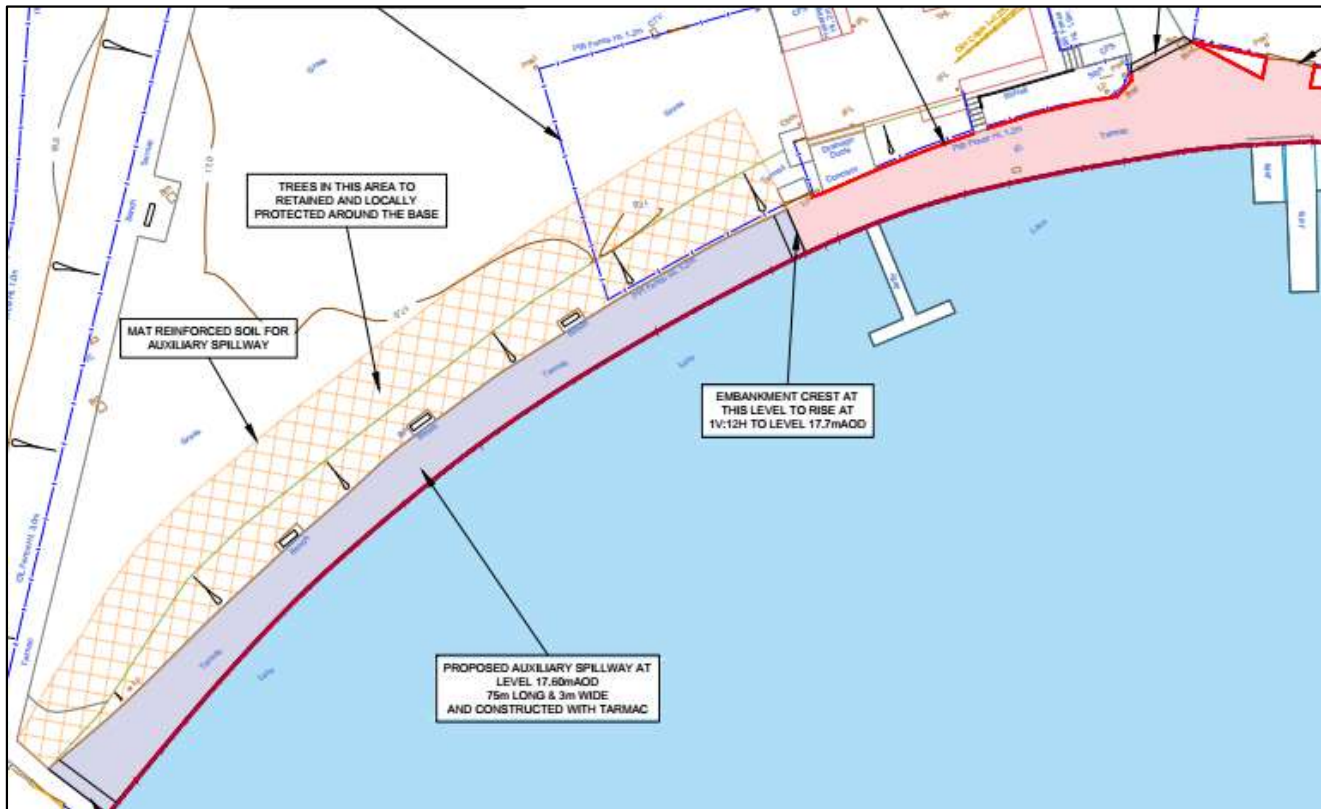
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Outline Design – Auxiliary Spillway



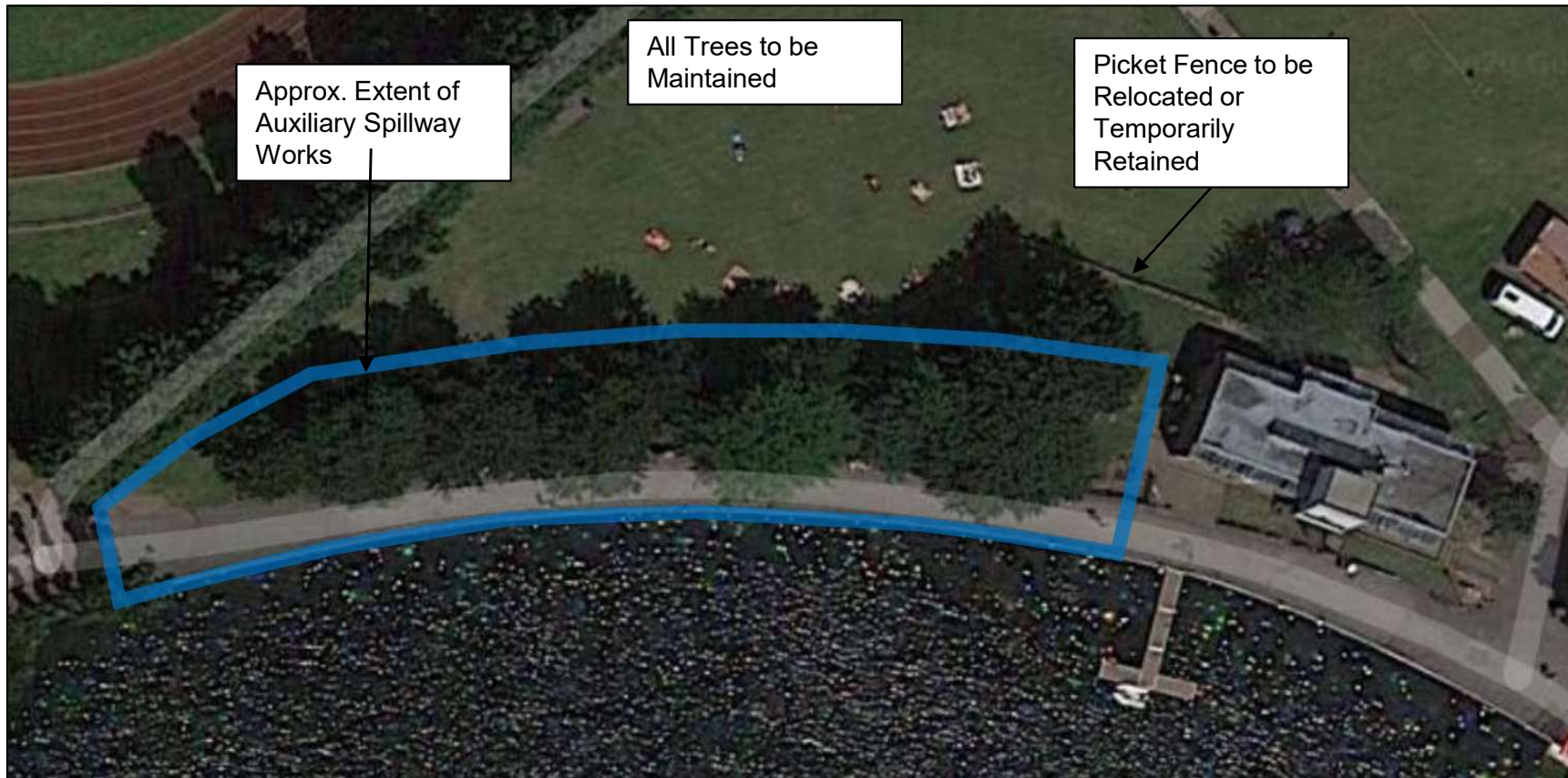
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Outline Design – Auxiliary Spillway



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Outline Design – Auxiliary Spillway



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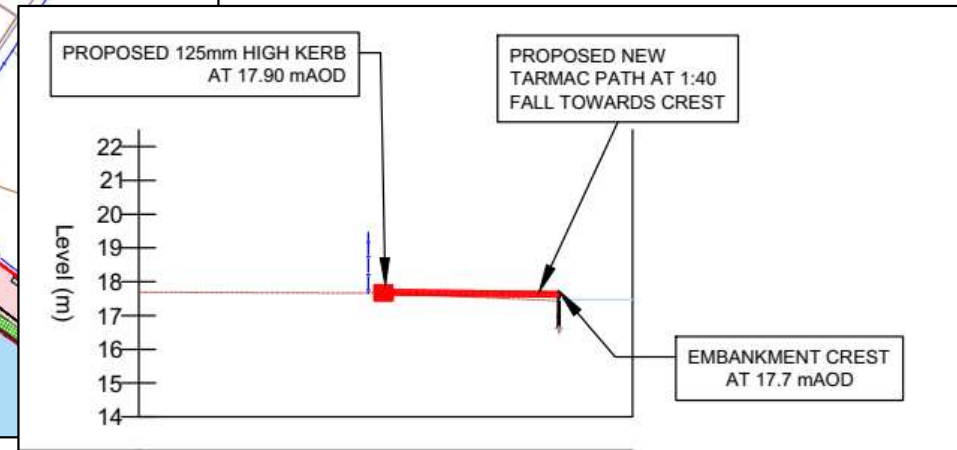
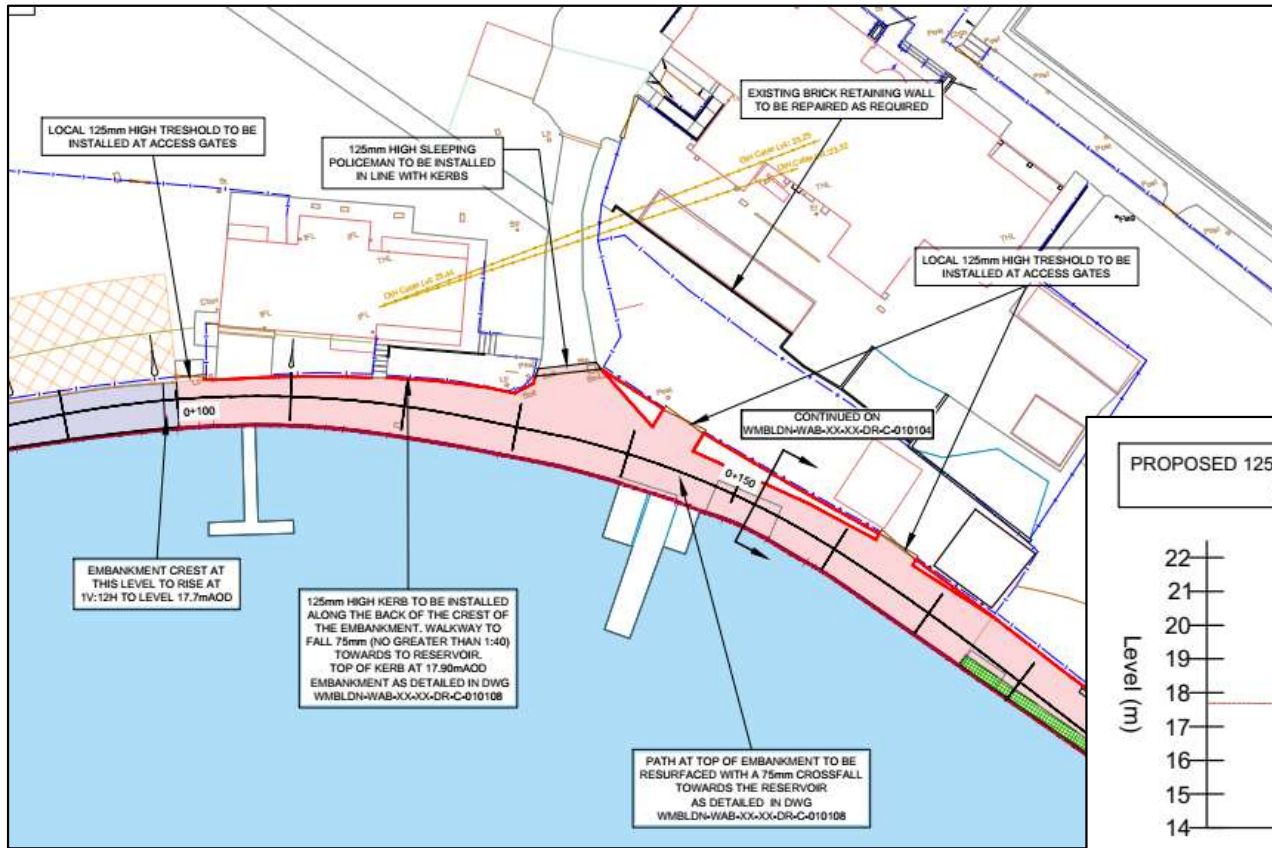
Outline Design – Remaining Embankment Modifications



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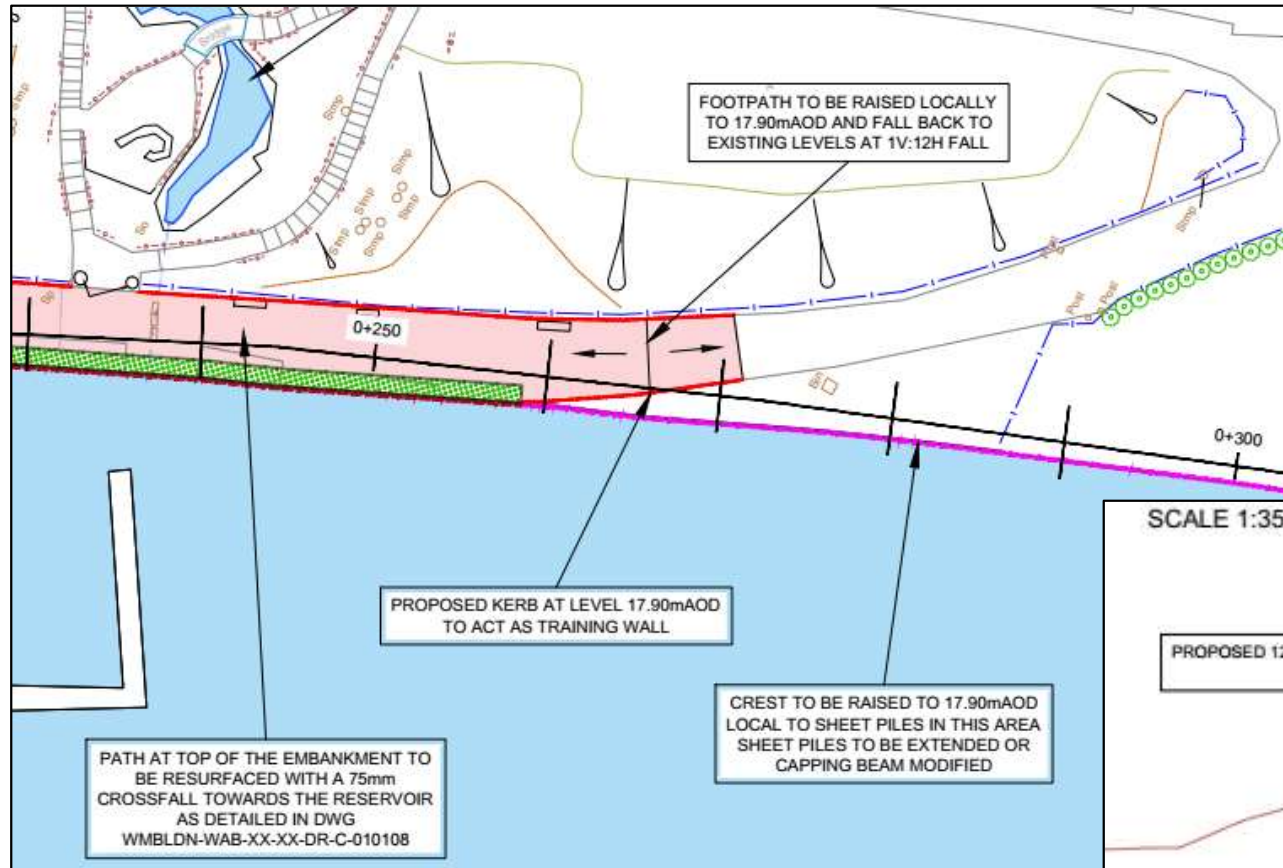
Outline Design – Remaining Embankment Modifications

- Top of piles maintained at 17.70m AOD
- 125mm kerb plus 75mm fall to form 17.90m AOD crest on embankment side of footpath
- Local modifications to levels will be required at entrances
- Softer/Rounded Kerb lines than those indicated

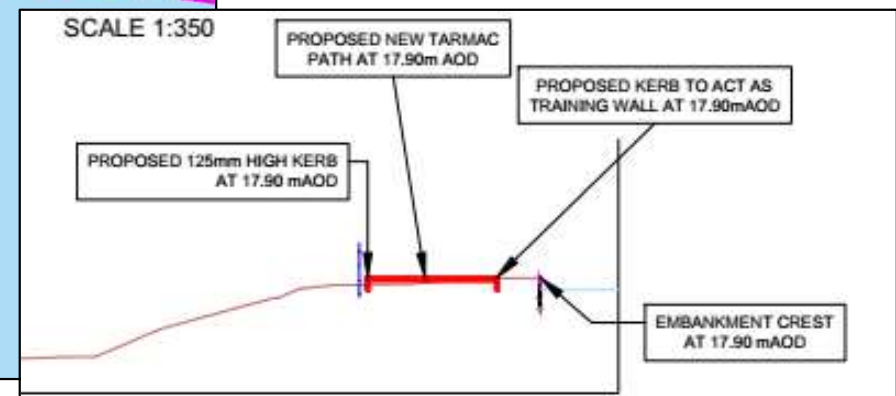


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Outline Design – Remaining Embankment Modifications



- All trees retained, except for saplings



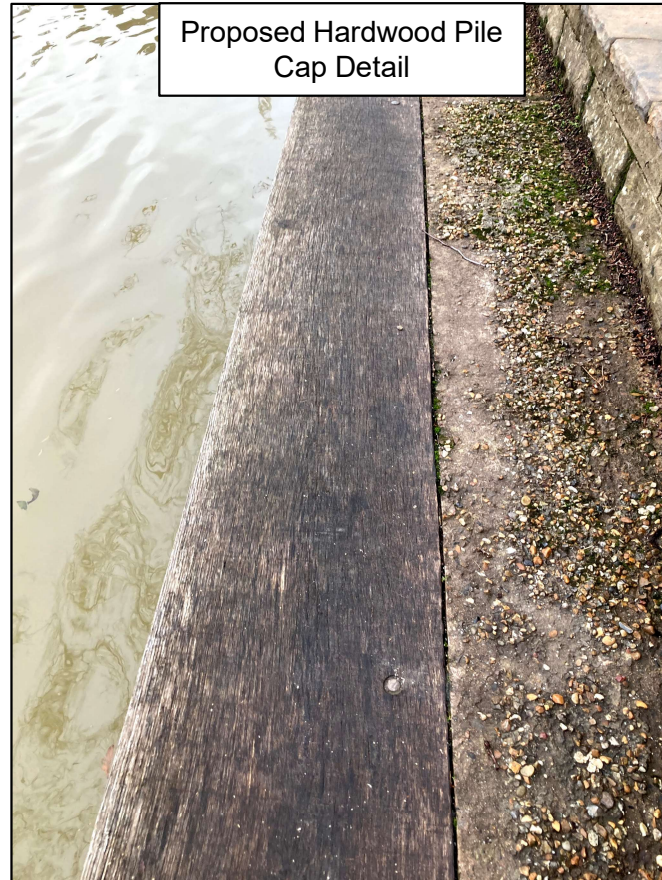
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Outline Design – Remaining Embankment Modifications



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Outline Design – Pile Repairs and Capping



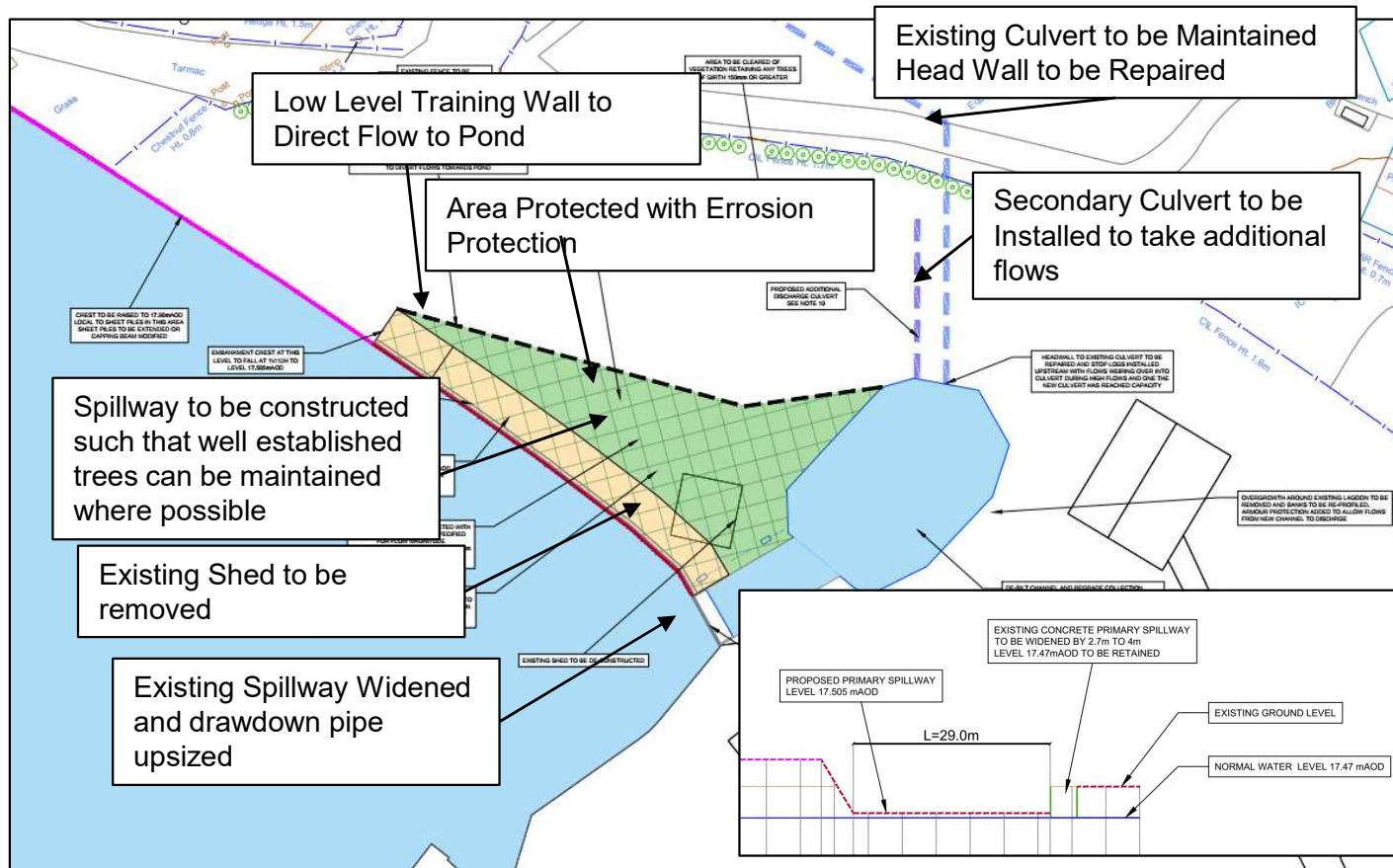
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Outline Design – Primary Spillway



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Outline Design – Primary Spillway

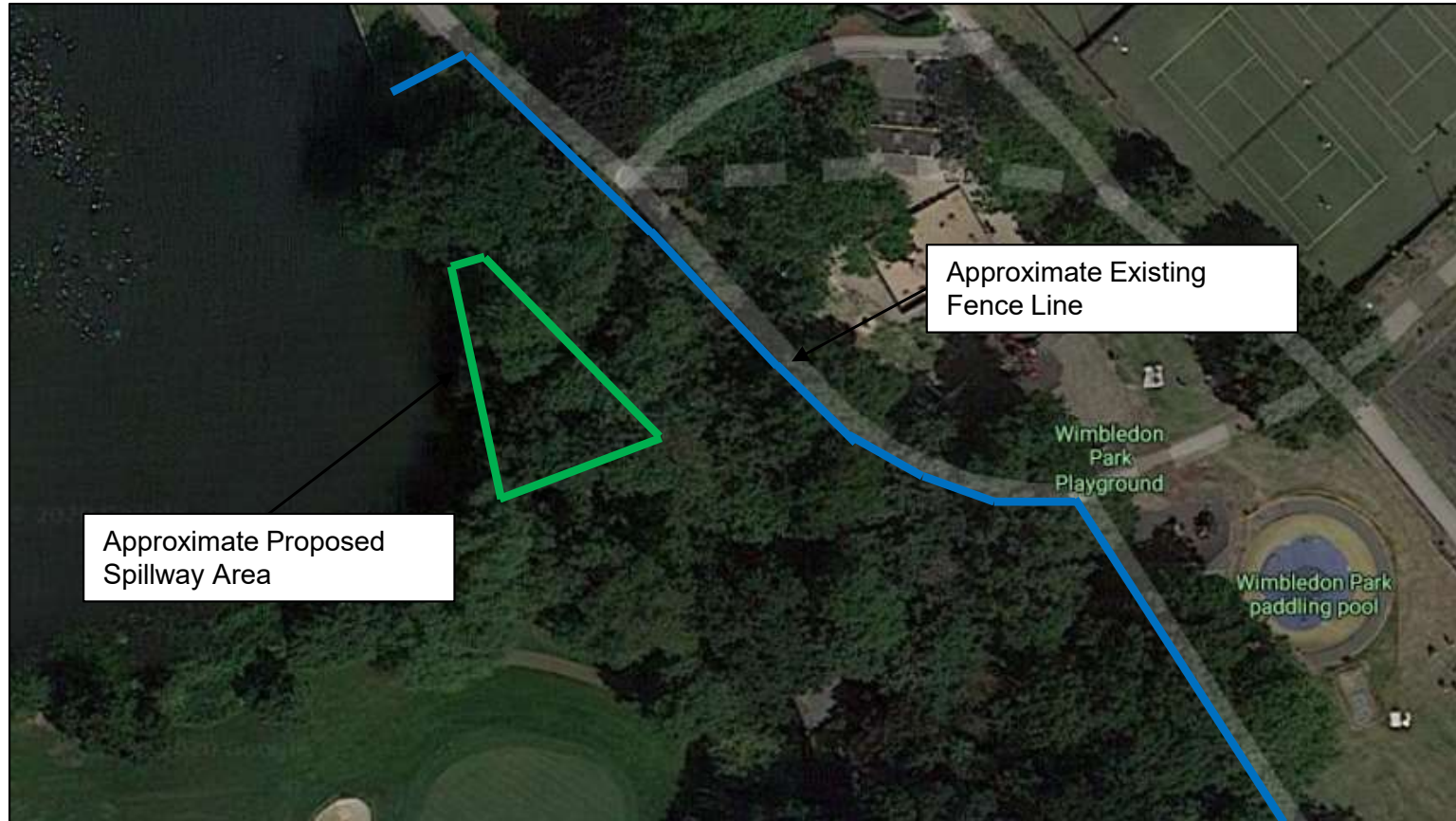


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Outline Design – Primary Spillway



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Outline Design – Primary Spillway

Existing 1.3m Wide Primary Spillway



Spillway Erosion Protection System



Eel Pass Incorporated in Primary Spillway



Proposed 4m Wide Primary Spillway

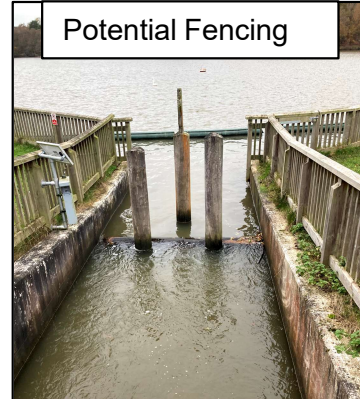
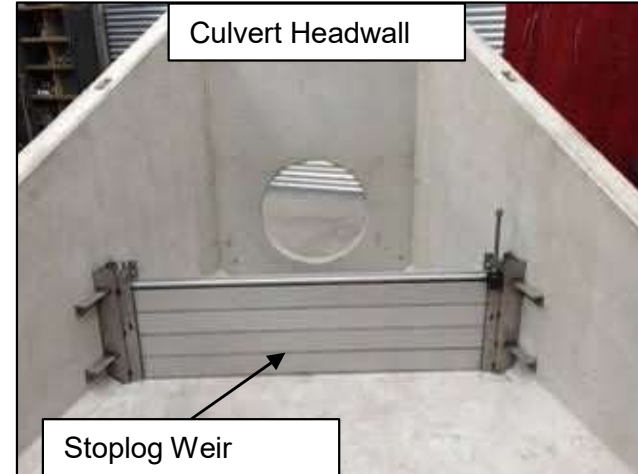
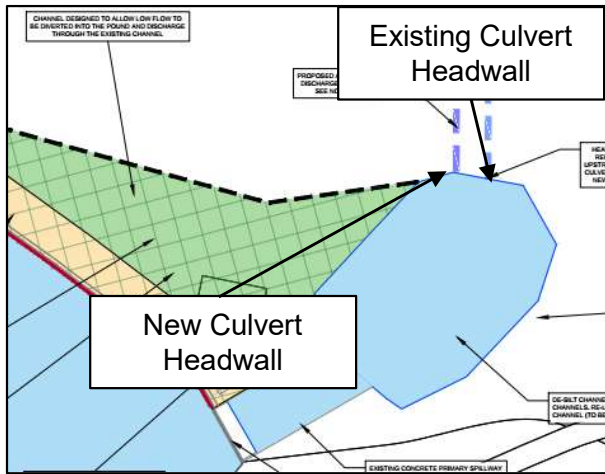


Spillway Erosion Protection System



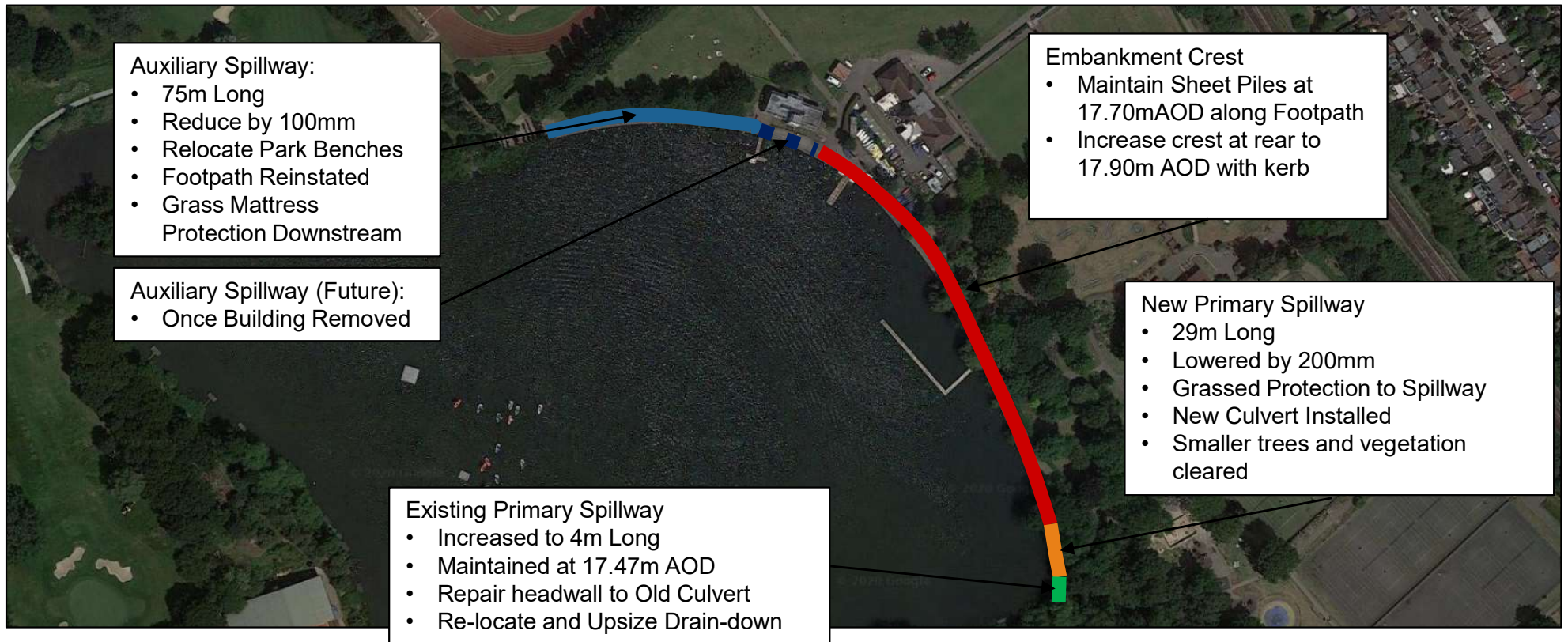
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Outline Design – Stilling Pond



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Outline Design – Summary



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Next Steps

- Engineering Design
 - Complete hydraulic design for spillways and associated protective measures
 - Undertake downstream flood modelling and flood risk assessment (ensuring risk of flooding elsewhere is not increased)
 - Prepare design drawings
- Consult with an independent historic landscapes consultant
- Undertake ecological and arboricultural appraisal for proposed scheme
- Obtain topo and tree positional survey for Ashen Grove Wood
- Overlay tree survey and adjust primary spillway to minimise tree impact where possible
- Prepare landscaping plans and details
- Produce pictorial visualisations of key areas
- Pre-app consultation with Historic England, Garden Trust and EA
- Public Consultation
- Prepare and submit planning application



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Questions?
