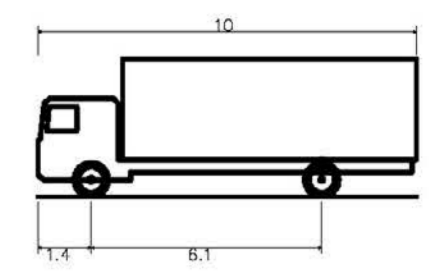


FTA Design HG Rigid Vehicle (1998)



FTA Design HG Rigid Vehicle (1998)
 Overall Length 10.000m
 Overall Width 2.500m
 Overall Body Height 3.645m
 Min Body Ground Clearance 0.440m
 Track Width 2.470m
 Lock to lock time 3.00s
 Kerb to Kerb Turning Radius 11.000m



NOTE:
 VEHICLE HEIGHT = 3.645m
 BALCONY HEIGHT = 3.850m
 BALCONY CLEARANCE = 205mm

Mark	Revision	Date	Drawn	Chkd	Appd
K	Boat House flood defence line revised	21.06.18	REM	MB	RAP
J	Masterplan base updated & tracking revised	11.06.18	REM	RAP	RAP
H	The Maltings access & tracking revised	04.06.18	REM	RAP	RAP
G	Masterplan base updated & tracking revised	31.05.18	REM	RAP	RAP
F	Balconies added and tracking updated	25.05.18	REM	RAP	RAP
E	Masterplan base updated & tracking revised	04.01.18	REM	GD	RAP
D	Landscape base updated, tracking & kerb geometries revised	01.12.17	REM	GD	RAP
C	Landscape base updated, tracking & kerb geometries revised	15.11.17	REM	-	-
B	Landscape base updated, tracking & kerb geometries revised	18.10.17	REM	-	-
A	Landscape base updated, tracking & kerb geometries revised	06.10.17	REM	-	-

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.
 UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty is made to this effect. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Drawing Issue Status
FOR PLANNING

**STAG BREWERY, MORTLAKE
 POSSIBLE HIGHWAY LAYOUT - PHASE 1
 VEHICLE SWEEP PATH ANALYSIS FOR A
 10m RIGID LORRY**

Client
**RESELTON
 PROPERTIES LTD**

Date of 1st Issue 04.09.2017	Designed REM	Drawn REM
A1 Scale 1:500	Checked GD	Approved RAP
Drawing Number 38262/5501/062	Revision K	

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Appendix D

DRAFT

EXISTING TOWPATH





C. Second Response to Environment Agency

Appendices

River Wall Environment Agency Comments
WIE10667-103-BN-7-2-1-EA
WIE10667

Direct Tel: 0207 928 7888
Direct Email: brendan.mccarthy@watermangroup.com

Our Ref: WIE10667-103-181030-BM-RiverWall
Your Ref: SL/2018/118128/02-L01

Date: 30th October 2018

Joe Martyn
Environment Agency
3rd Floor, Seacole Building
2 Marsham Street
London SW1P 4DF

Dear Joe,

RE: Stage Brewery – River Wall

I am writing in response to your comments dated 18th September 2018 in relation to the proposals for a new river wall at the Stag Brewery Site (planning reference: 18/0547/FUL). Please see below the information in response to your comments.

Query 1) – Details of a continuous fit for purpose defence line at construction stage – We accept that details will be provided at the detailed design stage when a contractor is appointed and a Flood Risk Activity Permit is applied for.

Response – n/a

Query 2) – Details of the lifespan of the flood defence – Accepted

Response – n/a

Query 3) – TE2100 raisings – We note that the proposed glass balustrade will be part of the flood defence wall thereby raising it to TE2100 levels at the construction phase. We will require cross sections representative of all sections through the defence illustrating the proposed crest level of the flood defence line and all supporting structures (particularly where steps are located).

Drawing 38262/5501/062 illustrates the boathouse building on the eastern end of the site incorporates windows and internal access point below the TE2100 level within the flood defence line. The finished floor levels in the lobby/entrance area of the boat house are proposed to be set at 6.03m AOD, but the boat house finished floor level is to be set at 4.25mAOD. Details of how access will be achieved from the landward side of the flood defences into the boathouse will need to be provided.

We will require cross section drawings of the boathouse and demonstration of how TE2100 levels will be achieved. The flood defence line must be continuous and not contain openings such as windows and access points. Additionally it will need to be demonstrated that no utilises which could compromise the defence line and integrity of the river wall structure.

The proposed boathouse should be structurally independent of the Tidal Defence and offset to allow access for inspection. The separation between the Tidal defence and the building is important as it would allow for potential future maintenance works and defence raising.

Additionally, the developer will need to demonstrate how the flood defence line within the redline boundary will tie into adjacent properties for future TE2100 raisings (specifically at Ship Lane and Bull Alley). The developer may wish to reconsider the line of the flood defence and how the continuous line of the defence between the proposed boathouse and Bull Alley can be achieved.

Response – We will provide cross sections illustrating the proposed crest level and all supporting structures once the detailed design has been undertaken. It is envisaged that this information would be provided as part of the Flood Risk Activity Permit application.

In order for boats to be able to access the existing slip way it is necessary to set the Finished Floor Level (FFL) of the majority of the boat house at 4.25m AOD.

Passive Defence

Given these levels constraints, the only feasible solution to provide passive defence as well as allowing access to the river for the boats, would be to construct the defence line through the boat house building. As set out in our previous response dated 27th June 2018 (Appendix A), the building concrete retaining structures will be designed to accommodate the surcharge loads to BS EN 1992 and marine exposure class will be in accordance with BS8500 for both mix design and cover. Although not a preferred solution by the EA, this would provide the protection, working within the site constraints. This building would form part of the formal flood defence and would not be demolished in the future without prior construction of an alternative defence.

Any windows to the boathouse building that form part of the defence line would require a bespoke design to ensure protection to the appropriate standard and would not be able to open. These windows would be fully tested prior to installation to ensure that they are fit for purpose. An example of the sort of product that could be used can be found here <https://thefloodcompany.co.uk/case-study-items/bam-nuttall/>. In this example testing of the bespoke flood product was undertaken at HR Wallingford to ensure it was of a suitable standard.

The team considered the potential to remove the windows of the boat house that front onto Mortlake High Street. However, having undertaken extensive pre-application consultation with the local authority planning officers, it is our understanding that the incorporation of windows in this location is of significant townscape importance. Pre-application advice encouraged the incorporation of as much glazing as possible at the lower levels of the building in order to both lighten appearance of the building and provide active frontage to the streetscape.

Another alternative of raising the window sill to provide a solid rather than glazed line of defence was considered. The difficulty of achieving this option is that in order to provide a sill at or above the flood level (6.7m AOD), the sill would sit above eye level (1.6m above ground level) of pedestrians walking along the adjacent footpath which is set at 5.1m AOD. This would inhibit the provision of active frontage to the streetscape.

In addition to the above, the lobby/entrance area of the boat house would be raised to 6.7m AOD as per drawing P10736-00-001-116-D02 and the hand sketch submitted with the previous response, these drawings are included in Appendix A.

Active Defences

Due to level constraints with regards to accessing the river from the boat house, if the defence line is to be permanent (passive) it will need to run through the boat house and it would not be possible to ensure that the building is structurally independent of the building.

However, if a standalone structure is preferred then the river wall and proposed flood gate (currently proposed for property level protection) to the north of the boat house could form the formal defence (set at 6.7m AOD). The gate is required in order to provide direct access to the river. All these works would raise the standard of protection to 6.7m AOD and therefore no further raising would be anticipated based on the current TE2100 Plan.

It was considered that the permanent passive protection provided by running the River Thames Defence line through the boat house would be preferable to a standalone structure between the boat

house and the River Thames which would require a gate to allow boats to access the River. However, if desired, the standalone flood defence/gate could be implemented as the formal flood defence line.

Bulls Alley

The proposed defence would tie into the existing Bulls Alley defence to ensure continuous protection. Further information in relation to the Bulls Alley defence is given overleaf in response to Query 5.

Query 4) – Vehicle tracking plan – Drawing 38262/5501/062 illustrates a vehicle tracking plan for a 10m long lorry, however the circa 4m clearance height appears to be insufficient to actually operate any plant within these areas. Furthermore, the flood defence within the northwest corner of the site appears to be inaccessible. It appears that the applicant will use of the existing building as the defence line. Further information is required as to how the defence will be accessed from the landward side.

We appreciate a new flood defence will reduce the likelihood of failure, however unrestricted access is still required for any unforeseen maintenance and emergency works and the future raisings.

Response – As set out in the previous response dated 27th June 2018 (Appendix A), the tracking accounts for vertical clearance to balconies and trees, ensuring that vehicles can pass beneath unrestricted. Drawings 38262/5501/091/D and 38262/5501/062/K (Appendix A) show that the vertical constraints are only present in a limited number of locations and that there are only two locations where the 10m Rigid Vehicle needs to pass under a balcony. In the west of the site one balcony overhangs the tracked vehicle path by a maximum of approximately 360mm. In the east of the site the balcony would only overhang the tracked vehicle path during a three-point turn manoeuvre by a maximum of 670mm. Given the overhangs are so small, vehicles or plant would easily be able to manoeuvre around these overhangs and operate effectively, this is considered acceptable.

As set out in the previous response the area to the south of the proposed flood defence and to the east of the Maltings Building would not allow vehicles to park directly adjacent to the defence. However, a crane could be used to move maintenance materials to the required location. Furthermore, due to the proposed piled construction of the defence it is anticipated that any maintenance would be minor or superficial. In the highly unlikely scenario that vehicle access is required to this area a temporary ramp could be constructed to bypass the steps.

The existing Maltings Building is part of the River Thames Defences in the present situation and it is not proposed to alter this as part of the development. A structural assessment of the Maltings Building was submitted with the planning application (18/0547/FUL, Appendix 12.4 of the ES) which shows that the walls have sufficient capacity to resist the increase in water level indicated in the TE2100 Plan. Access to the landward side of the defence line would need to be made through the inside of the Maltings Building as is done so in the existing situation. Access would also be available to the river side via Ship Lane.

Query 5) – Ship Lane and Bull Alley – Bull Alley, and the flood boards for this location are within the redline boundary of the application. Irrespective of ownership, developer will have to demonstrate both the residual lifespan and TE2100 crest level raising for all tidal flood defences within their red-line boundary. Our preference would be for the flood boards to be removed and a passive (static) flood defence installed. Regarding Ship Lane, we appreciate the applicant may not be the freeholder of this land, and therefore may not be liable to ultimately provide the flood defence across the road. However, the applicant is responsible for demonstrating how all flood defence line within their redline boundary, will be treated in light of TE2100 raising requirements and how these will tie in with the

defences on adjacent properties. Developments should not preclude or limit future defence raising options nor should they increase flood risk to neighbouring properties.

A development that precludes options for passive defences (to meet TE2100 levels), both increases the cost of future flood defence provision and increases residual flood risk due to the potential for the gate not to be operated. On public highways this risk is greatly increased because of 3rd party vehicle use that may damage the gate or simply park across it.

We appreciate that the gate options were discussed at the meeting of 26 September 2016, but as set out in the minutes to the meeting our preference is always for passive options for defence provision to be kept open – in this case we stated that the applicant would have to demonstrate that passive solutions were unsuitable prior to considering gated options. We do not believe the applicant has demonstrated this and do not accept that a flood gate is the only feasible solution, nor that gates are appropriate for a public highway. A review of our (open source) LiDAR data suggest the road levels already rises to approx. 6.1mAOD, albeit further landward than the current line. Hence a potential further 600mm is all that is required to achieve TE2100 levels (not 1m). Given the complete re-development of this site, we see no obvious reason why the scheme cannot be designed to allow for a passive solution to be provided in ship lane, and would recommend you progress your designs along this principle (rather than try and demonstrate a passive defence is not possible).

We accept that some future passive defence line options would require changes to third party defences (namely the ship pub). While we do not expect the developer to deliver works outside their red-line boundary, we do expect the developer to design a scheme that would not preclude a passive defence being installed in the future, and that this future passive defence line should be achievable with the minimum level of cost and disruption both to the development itself and adjacent properties.

Response – The development proposals would not alter the status quo in relation to the Bulls Alley defence and would not increase flood risk. It is therefore not reasonable or necessary in planning terms for the client to undertake any works to this defence. The Bulls Alley defence is also outside of the applicant's ownership and therefore is not responsible for carrying out works to it. We understand that the highway authority is the land owner therefore they are the riparian owner and are responsible for any upgrade of the Bulls Alley defence. Furthermore, the Port of London Authority (PLA) are known to use this gate regularly to assist them in removing the debris that builds up in this location. In the future the owner of this gate (understood to be the highway authority) would need to replace it with a new gate/wall to 6.7m AOD, however this is something the applicant is not able to provide themselves.

We appreciate that a passive defence is always preferable, however the practicalities of raising Ship Lane itself mean that this option is not suitable. It is correct that the level of Ship Lane does rise to circa 6.1m AOD and that at this point a raise of only 600mm would be required. However, this would result in the River Thames Defence line moving back along Ship Lane in a southerly direction which in turn will allow flood water to flow further down Ship Lane than it would currently do. As a result, the defence height of 6.7m AOD would then need to be in place on either side of Ship Lane. This would render the currently proposed active frontages along Ship Lane unfeasible and would create a narrow corridor with walls on either side.

All ground floor level residential units within Building 3 on Ship Lane are proposed to have a finished floor level of 7.03m AOD, which is above the defence height of 6.5m AOD. However, there are several entrances to the building that are set at a level below this datum. These elements include a refuse store, a residential entrance, a substation and ramped access to the basement car park. All of these require level access in order to meet legislative requirements and must be accessible from street side.

The residential entrance is designed to connect to a raised entrance route from the opposite side of the building. This would provide an alternative means of escape in the event of a flood. Raising the street itself would encounter various technical challenges including the ability to achieve wheelchair accessible gradient slopes and the ability to retain mature trees within altered footpath levels.

Building 17 also fronts onto Ship Lane, however this building has only been submitted in outline and therefore details such as the internal layout and location of access are not fixed at this stage. However, similarly to Building 3 it is likely that there will be a need for refuse stores/substations etc. that will require level access from the street side.

In addition, the Ship Lane Passage is located between the application site and the Ship Pub. Based on the current proposal the future gate would protect this area from flooding. However, if the defence line is moved back then there is the potential for flood water to flow down this passage and affect the existing properties to the north of the site (i.e. by passing the defences at the front of these properties). Alternatively, a gate would need to be provided to protect the passage.

We take on board your comment regarding the potential for vehicles to block the future gate. To mitigate this risk bollards could be incorporated to ensure vehicles do not block the gate.

Query 6) – drainage strategy – *Regarding the proposed outfalls, the applicant should note outfalls will have to be positioned at an appropriate height, and should be assessed to deal with expected tide locking at this height. An assessment of the need for scour protection (to protect foreshore and structural stability of flood defences) will be needed, along with delivery of appropriate scour mitigation. Outfalls, that penetrate the tidal defence line below the statutory level and with a diameter greater than >300 mm must contain 2 in-line non-return valve's (such as flap valves). Further details on the construction of the outfalls and method statements etc. will have to be provided and reviewed as part of the Flood Risk Activity Permit application.*

Response – We will ensure that any relevant outfalls have two in-line non-return valves and that further details are provided as part of the Flood Risk Activity Permit application. Please note that tide locking was considered in the Drainage Strategy and MicroDrainage calculations undertaken to confirm that the surcharged outfalls would operate without flooding the site.

Query 7) – enhancement to the Thames Path and river bank – *The application offers minimal enhancements for nature and biodiversity. The development is located immediately adjacent to the River Thames and offers an excellent opportunity to enhance the river environment and improve the river corridor for people and wildlife.*

The applicant states that they do not own do not own the tow path which. However little has been done to improve biodiversity within the submitted proposals. There are green areas and trees, but no mention of green roofs, biodiverse planting (i.e native species flowers to attract invertebrates) or bat boxes, bird boxes etc. It is therefore not been demonstrated that the development will result in a net gain to biodiversity.

Any new planting within the buffer zone should use native species. Any loss of habitat should be mitigated for within the development with the use of green and/or brown roofs to encourage biodiversity.

The National Planning Policy Framework (NPPF) requires local planning authorities to aim to conserve and enhance biodiversity when determining planning applications by minimising impacts on biodiversity and providing net gains in biodiversity where possible.

In addition, the Thames river basin management plan requires the restoration and enhancement of water bodies to prevent deterioration and promote recovery of water bodies.

London Borough of Richmond's Local Plan Policy LP 15 Biodiversity states that 'The Council will protect and enhance the borough's biodiversity, in particular, but not exclusively, the sites designated for their biodiversity and nature conservation value, including the connectivity between habitats.'

By

- *Supporting enhancements to biodiversity;*
- *Incorporating and creating new habitats or biodiversity features, including trees, into development sites and into the design of buildings themselves where appropriate;*
- *Major developments are required to deliver net gain for biodiversity, through incorporation of ecological enhancements, wherever possible;*
- *Enhancing wildlife corridors for the movement of species, including river corridors, where opportunities arise; and*
- *Maximising the provision of soft landscaping, including trees, shrubs and other vegetation that support the borough-wide Biodiversity Action Plan.*

The London Borough of Richmond's Local Plan Policy LP 18 River corridors states that 'Development adjacent to the river corridors will be expected to contribute to improvements and enhancements to the river environment.'

Response – Ecological input was provided at an early stage of the scheme design, commencing with the provision of a Preliminary Ecological Appraisal (PEA) in 2016 and then refined based on the results of additional surveys for birds and bats.

As set out within the Landscape Design and Access Statement (Landscape DAS) prepared by Gillespies and submitted with the planning applications (references: 18/0547/FUL, 18/0548/FUL, and 18/0549/FUL), bat boxes will be integrated into the green and brown roofs on various buildings of the development (detailed component, Development Area 1) with a total of 10 boxes, tubes or bricks provided in association with soft landscape treatment on these roofs. Boxes are to be oriented between southeast and southwest to suit use.

Bird boxes are also provided on roofs closer to the River Thames, including 3 Schwegler 2H Nest Boxes for black redstarts (a London BAP and S41 species) and 7 additional boxes for more general species. These are to be oriented east or west to suit use.

Plant species have been selected to suit a variety of habitats and microclimatic conditions across the site. These will include a range of plants suitable as food or habitat plants for a wide range of fauna, including bee attracting flowering plants.

For the outline component of the Development (Development Area 2), the biodiversity strategy will utilise the same principles as above and will be provided at the detailed design stage. The biodiversity strategy is in line with the recommendations of the PEA and protected species report. As detailed in the ES Chapter the proposed development will provide landscaping as well as other artificial habitats to birds and bats detailed above (as detailed in the landscape DAS submitted for planning, extracts of the landscape DAS are provided in Appendix B), inherent to the scheme design, which would provide enhanced opportunities for biodiversity. The opportunities within the Stag Brewery component of the Site include:

- Over 400 new trees and up to 51 retained trees;
- Hedge planting (1.5 m high) enclosing all ground level residential courtyards east of Ship Lane in the detailed part of the Stag Brewery component of the Development;
- A minimum of 10 bat boxes incorporated in the Development Area 1 (number of bat boxes within the outline component of the Site would be determined following the reserved matters application);
- Provision of new trees including the use of native species, or species of benefit to wildlife. This includes littoral plant species in areas close to the river edge responding to existing riverside vegetation and fruit / berry and nut bearing trees located in the community park south of the proposed school;
- Provision of biodiversity roofs, including a mix of green and brown roofs; and
- A new green link connecting the River Thames and Mortlake Green.

In addition, the Chalkers Corner component of the Site would provide a new public resting space, enhanced public realm and replacement and additional tree planting.

The recommended detailed towpath works are covered within the Landscape Design and Access Statement (pages 103-111) and summarised below:

- Pruning of understorey vegetation on Towpath to open key views;
- Existing granite setts on Towpath, public draw dock and slipway retained;
- Rediscovered railway track - express within new pavement design to new seating area;
- Seating provided at locations with good views to the river;
- Life-saving equipment will be provided by PLA - located as directed;
- Retain lower section of boundary wall where feasible - as facing to new flood wall;
- Additional seating and interpretative signage is proposed to be added in the new paved dock area; and
- Some amendments to existing kerbs and paving will be required to integrate with proposed works and access into the Rowing Club storage area.

Given the ecological baseline of the Site and the proposed enhancement measures it is assessed that the scheme will provide an ecological enhancement in line with planning policy requirements.

Yours sincerely



Brendan McCarthy
Technical Director
For and On Behalf of Waterman Infrastructure & Environment Ltd

Appendix A **SEE APPENDIX B OF BRIEFING NOTE FOR FIRST
RESPONSE LETTER TO ENVIRONMENT AGENCY**

DRAFT

Appendix B

DRAFT

SOFT LANDSCAPE STRATEGY

PLANTING STRATEGY

The soft landscape strategy of the Stag Brewery development includes several layers of planting typologies including streetscapes, plazas and squares, courtyards, riverside littoral planting and incorporation of existing trees.

The main structural planting of trees will comprise lines of feature trees delimiting one or both edges of the main access routes – Ship Lane, Linear Park and Thames Street.

Street trees will also be installed along residential streets, as well as augmenting tree planting on Lower Richmond Road and Mortlake High Street. A mix of perennial shrub and groundcover planting will be provided throughout all softscape areas, with mass planting and screen planting to suit use of each area. Planting mature heights will take into account safety and secure by design parameters to ensure general safety and to maintain sightlines and passive surveillance opportunities.

Soft landscape strategy for plazas and squares in the development will provide for a range of functions and activities, as well as providing resting places, shade and seasonal celebration. Residential courtyards will provide green amenity open space for residents and visitors, as well as natural play opportunities for children.

Littoral plant species are used in the areas close to the river edge, responding to existing riverside vegetation. This plant selection emphasises the riverside location and integrates the river edge living environment into the development. A mix of native, locally adapted and exotic plants are proposed to provide increased biodiversity and a sustainable mix of plants with improved drought resistance and longevity.

Good quality existing trees around the site will add valuable character to the site, and together with the soft landscape strategy, will deliver a well-connected green network in and around Stag Brewery development.

PLANT PALETTE

-  Lawn
-  Mass Plantings
-  Hedges
-  Rain Gardens
-  Site Application Boundary
-  School Application Boundary



BIODIVERSITY STRATEGY

BIODIVERSE ROOFS:

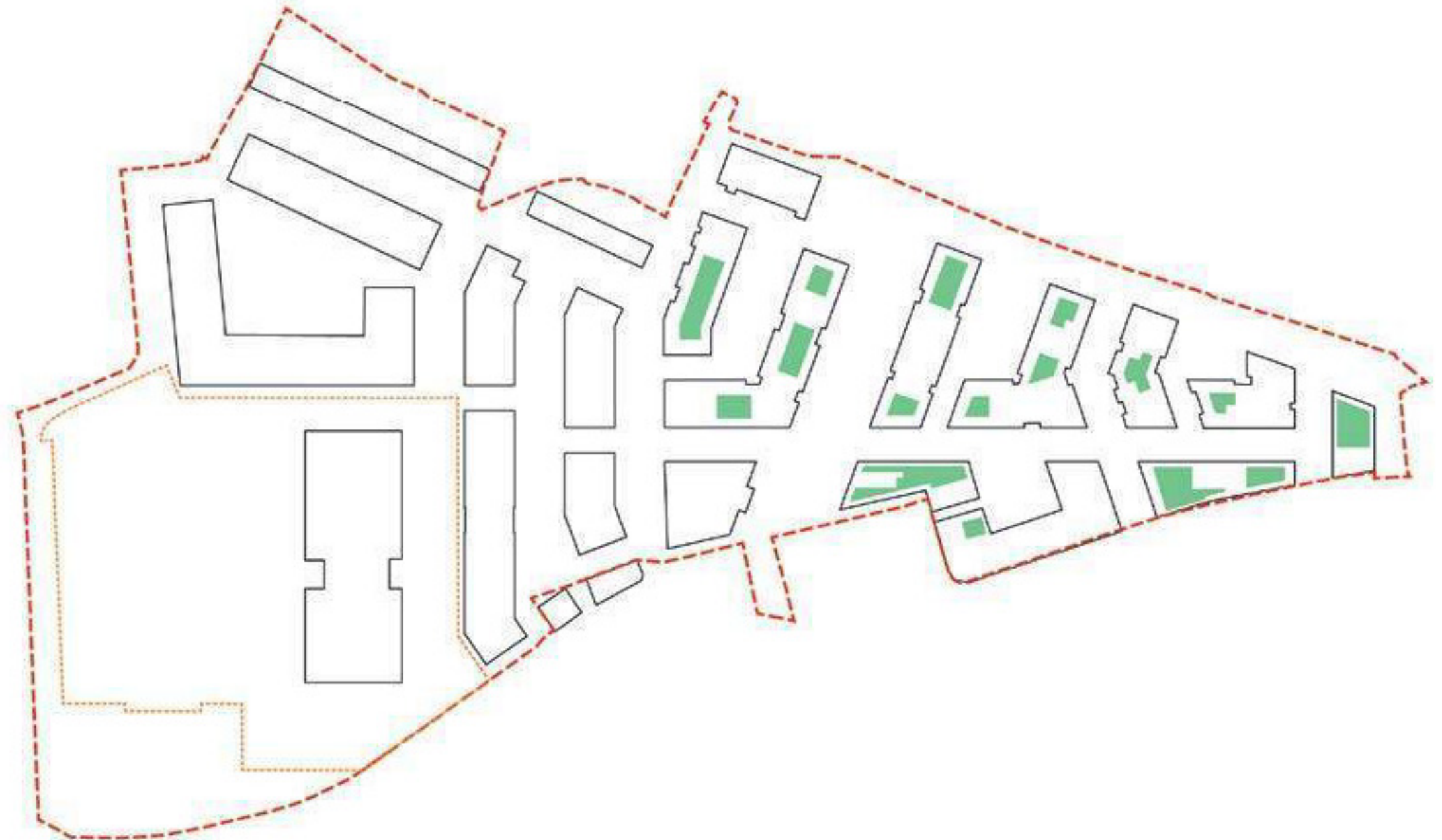
It is proposed to implement extensive green / brown roof systems on a number of the buildings with flat roofs, exploiting the ecological potential of these upper levels. A percentage of the roof space on new buildings in the development has been designed as extensive green or brown roofs, to provide biodiversity and energy benefits, as well as contributing to stormwater drainage and short term attenuation storage.

Green and brown roofs provide beneficial insulation to buildings and a degree of infiltration and storage of rainwater, while adding to the biodiversity of the site with a range of plant types, habitats for various insects and invertebrates and potentially birds and bats. A number of bat and bird boxes and bricks will be integrated into the roofscape and informal habitats created with rocks and gravel surfaces to brown roof sections.

Green roofs include a wild flower and native grasses mix and are designed as a sustainable, biodiverse roofscape and a pleasant visual outlook for surrounding higher buildings. This light weight roof system will assist in absorbing rainwater as well as increasing the biodiversity of the site by providing additional foraging and habitat for insects and birds.

Brown roofs are accessible for maintenance purposes and will incorporate PV cells in some areas, as indicated in Architectural and MEP drawings. Each roof will be seeded with plant species collected from the site or nearby, to boost local endemic habitat and foraging for local species. Certain features will be introduced to maximise potential for biodiversity and habitat for target species. These will include log piles, stabs or twigs gathered from the local area, combined with bird and bat boxes noted below. Where possible, the substrate depth will be varied to provide opportunities for small pools of water to collect on the roof.

For Development Area 2, biodiverse roofs will be incorporated using same principles as above and additional details will be provided in detail design stage.



LEGEND

- Biodiverse roof (total 2,265m²)
- - - Site Application Boundary
- - - School Application Boundary

BIODIVERSITY STRATEGY

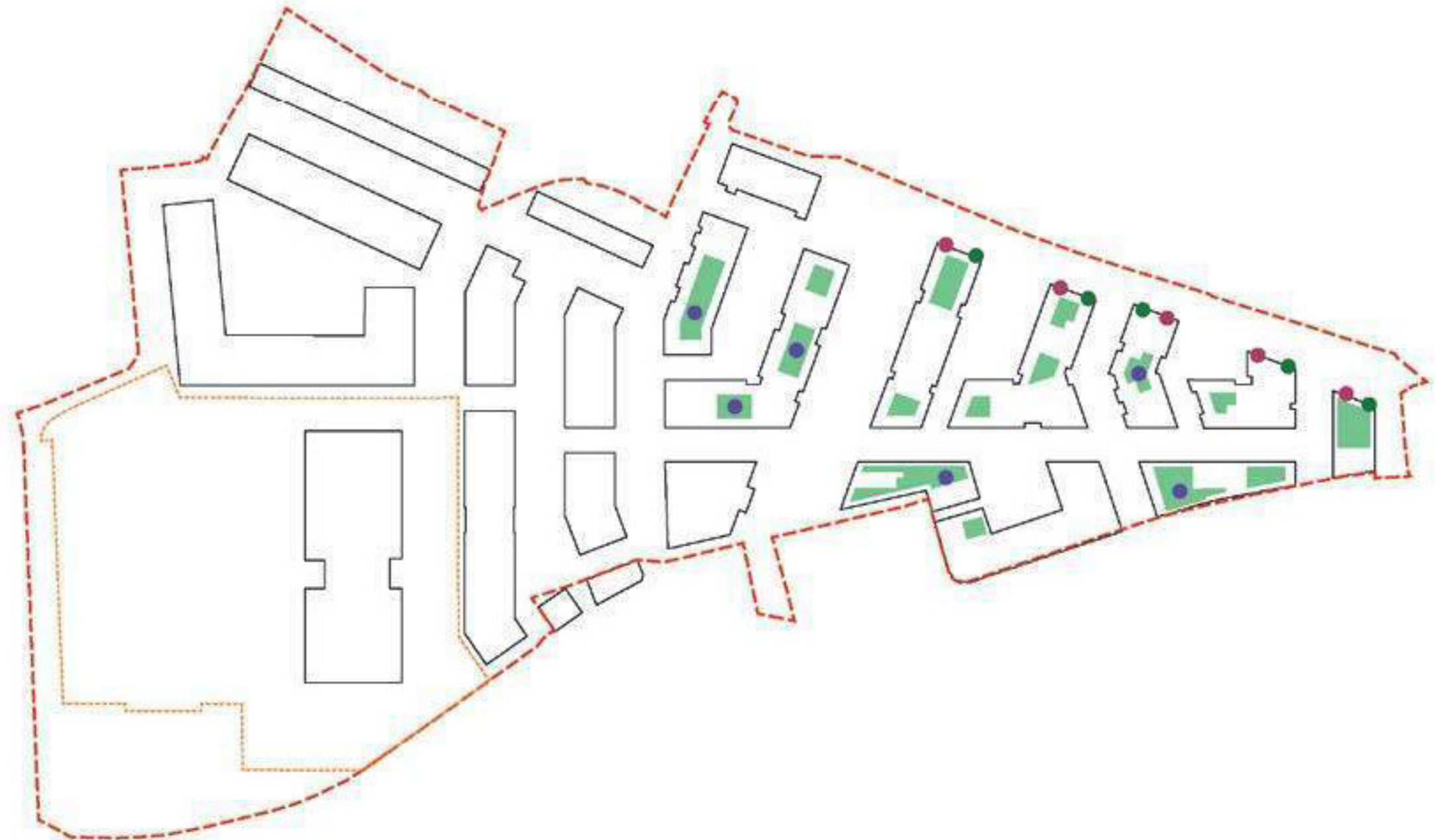
BIRD AND BAT BOXES:

Bat boxes are integrated into the green and brown roofs on various buildings of the development (detailed component) with a total of ten (10) boxes, tubes or bricks provided in association with soft landscape treatment on these roofs. Boxes are to be oriented between south-east and south-west to suit use.

Bird boxes are also provided on roofs closer to the River Thames, including three (3) Schwegler 2H Nest Boxes for black redstarts and seven (7) additional boxes for other bird types. These are to be oriented east or west to suit use. Plant species have been selected to suit a variety of habitats and micro-climatic conditions across the site.

These will include a range of plants suitable as food or habitat plants for a wide range of fauna, including bee attracting flowering plants.

For Development Area 2, the biodiversity strategy will utilise the same principles as above and will be provided in detail design stage.



LEGEND

-  Bird Boxes
-  Bat Boxes
-  Hibernaculum
-  Roof Habitat
-  Site Application Boundary
-  School Application Boundary



- ① Green Link
- ② Bottleworks Square
- ③ Maltings Plaza
- ④ Riverside terrace
- ⑤ Courtyard garden
- ⑥ Towpath
- ⑦ School Entry Court
- ⑧ Private gardens
- ⑨ Residential street
- ⑩ School sports field
- ⑪ Public amenity space
- ⑫ Community park
- ⑬ New park entrance
- ⑭ Car park

--- Site Application Boundary
 --- School Application Boundary
 (Refer to Application B)



D. Environment Agency Meeting Notes (03/12/18)

Appendices

River Wall Environment Agency Comments
WIE10667-103-BN-7-2-1-EA
WIE10667

Donal O'Donovan

From: Donal O'Donovan
Sent: 10 December 2018 09:51
To: 'Martyn, Joe'
Cc: Brendan McCarthy
Subject: Stag Brewery EA Meeting Notes
Attachments: WIE10667-103-181030-BM-RiverWall.pdf

Hi Joe,

Thanks for meeting us last week. I have drafted some notes on the meeting below, please let me know if you have any comments. I have also attached our previous responses for reference.

Query 1 – It was agreed that sufficient information has now been submitted that confirms that there is a continuous fit for purposes flood defence line for the main length of the site. However, further work is required in relation to the Bulls Alley and Ship Lane defences (see Queries 3 and 5).

Query 2 – No further information is required.

Query 3 and 5 – The EA's preference is for passive flood defences that provide permanent protection and they do not want future flood defence options restricted to the use of gates. One potential option discussed in relation to the Boat House was to introduce a separate flood defence wall within the building, however this had knock on impacts in relation to DDA compliance. The design team agreed to look at potential options for the Boat House and Ship Lane, that would aim to provide design solutions to allow future proofing to achieve a passive flood defence in these locations by 2065. Where there are constraints that have informed the current design (i.e. highways, planning officers etc.) or that restrict other options these will be clearly set out for the EA to review.

The EA agreed that no works would need to be undertaken to the Bulls Alley defence in the present. However, they require work/drawings that show that the Boat House building would not limit options for raising the Bulls Alley defence in the future as part of the TE2100 Plan (i.e. look at feasibility of a ramp). One example discussed was the potential for a ramp to be introduced. Again if there are constraints that limit options these will need to be clearly set out for the EA to review.

If constraints mean that passive defences are not possible to the full TE2100 height of 6.7m AOD then the EA would want the height of any gate limited to minimum it needs to be (i.e. raised ground provides protection to say 6.0m AOD and then a gate would only need to be 0.7m high).

Query 4 – The EA agreed that the vehicle tracking undertaken to date was sufficient. However, it was noted that if changes are made to the layout as a result of the Ship Lane or Bulls Alley defences then the tracking would need to be updated accordingly.

Query 6 – No further information is required.

Query 7 – This information has been provided within the application documents. Pages of Landscape DAS Application A relating to biodiversity include:

Landscape Masterplan: Page 23
Trees and planting strategy: Page 38-43
Biodiversity strategy: Page 60-62
Maltings Plaza: Page 83-85
River terrace: Page 87-91
Towpath information: Page 103 -111

We have also prepared document P10736-00-001-717 'Supporting document to response to LBRUT ecologist comments' which contain latest information about planting, trees, biodiversity roof and rain garden.

<https://Gillespies.bigfilebox.com/lwt/231953-4Vh2HQAjyUZXZuKXHQ06A73BA>

Cheers,

Donal O'Donovan
Senior Engineer
Waterman Infrastructure & Environment Ltd

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E. Updated Defence Drawings – Ship Lane

Appendices

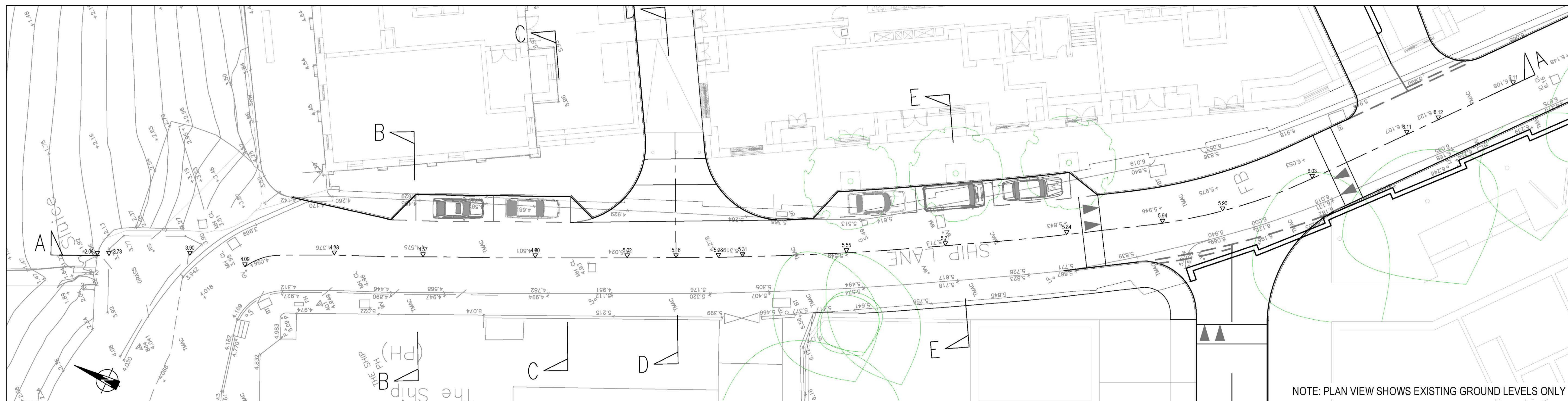
River Wall Environment Agency Comments
WIE10667-103-BN-7-2-1-EA
WIE10667



SECTION A A - FUTURE GROUND PROFILE (1:12 SLOPE)



SECTION A A - EXISTING GROUND PROFILE (CURRENT PLANNING APPLICATION)



SECTIONS A A TO E E - PLAN VIEW

NOTE: PLAN VIEW SHOWS EXISTING GROUND LEVELS ONLY

Mark	Revision	Date	Drawn	Chkd	Appd
A	Labelling revised	07.01.19	REM	MB	MB

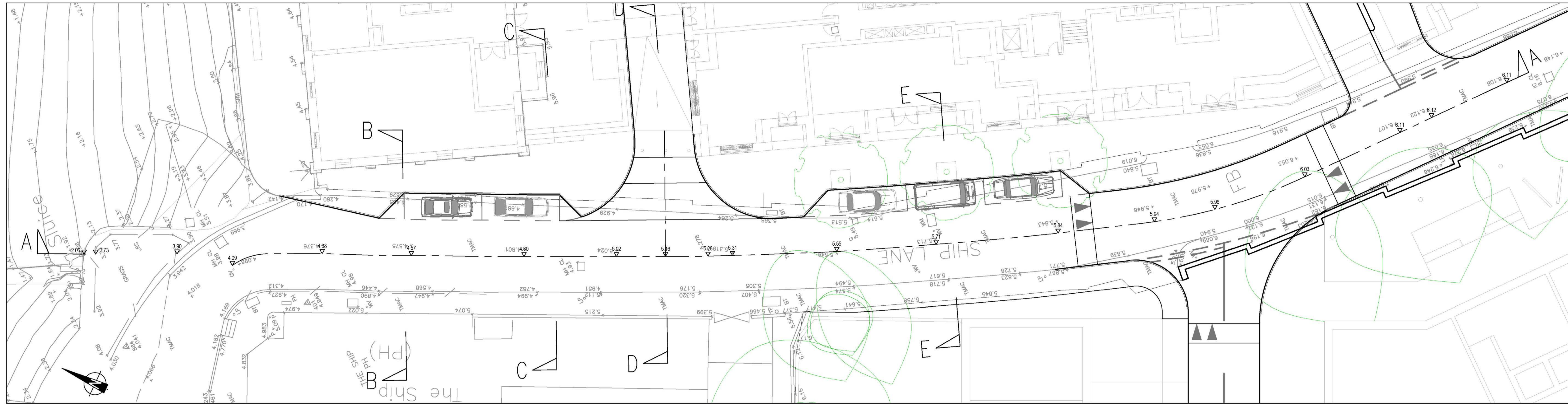
UTILITIES NOTE: Do not scale from this drawing. If in doubt, ask.
 UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake their own investigation where the presence of any existing sewers, services, plant or apparatus may affect their operations.

Drawing Issue Status: **FOR INFORMATION**

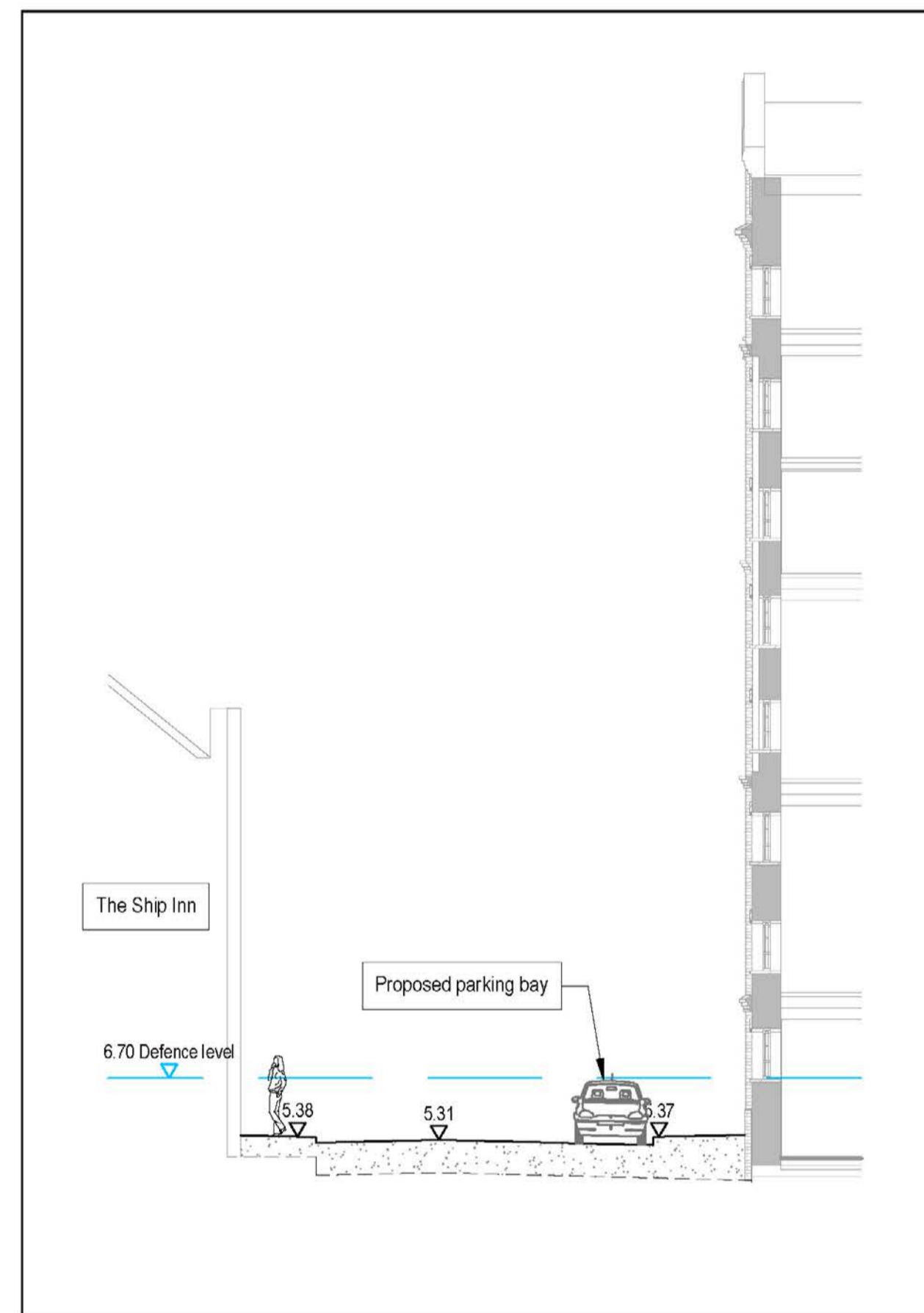
STAG BREWERY, MORTLAKE
SHIP LANE
POSSIBLE GROUND PROFILES FOR FLOOD DEFENCE MEASURES (SHEET 1 OF 2)

Client: RESELTON PROPERTIES			
Date of 1st Issue: 20.12.2016	Designed: REM	Drawn: REM	Approved: REM
A0 Scale: 1:125	Checked: RAP	Approved: RAP	Revision: A
Drawing Number: 38262/5501/097	Revision: A		

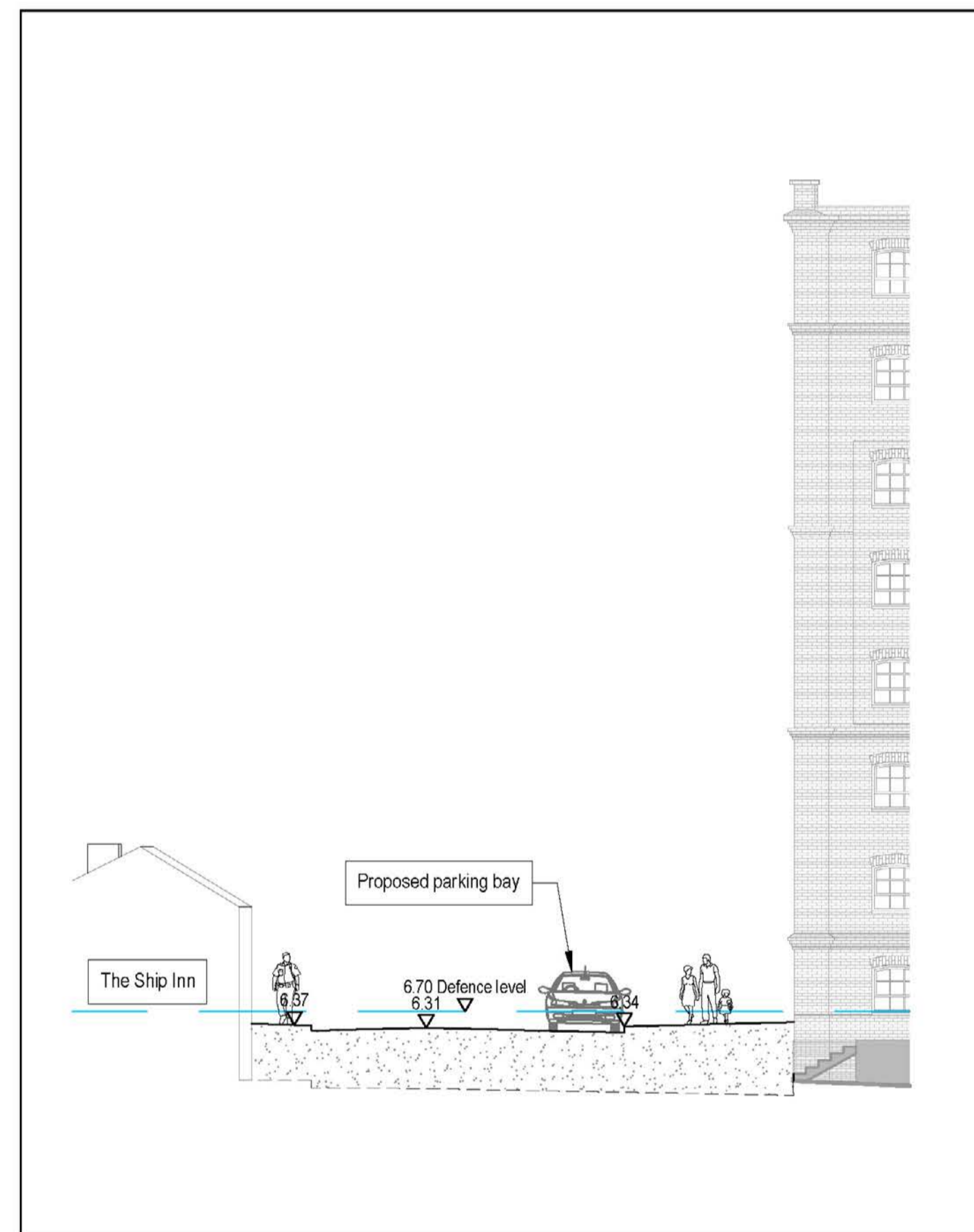




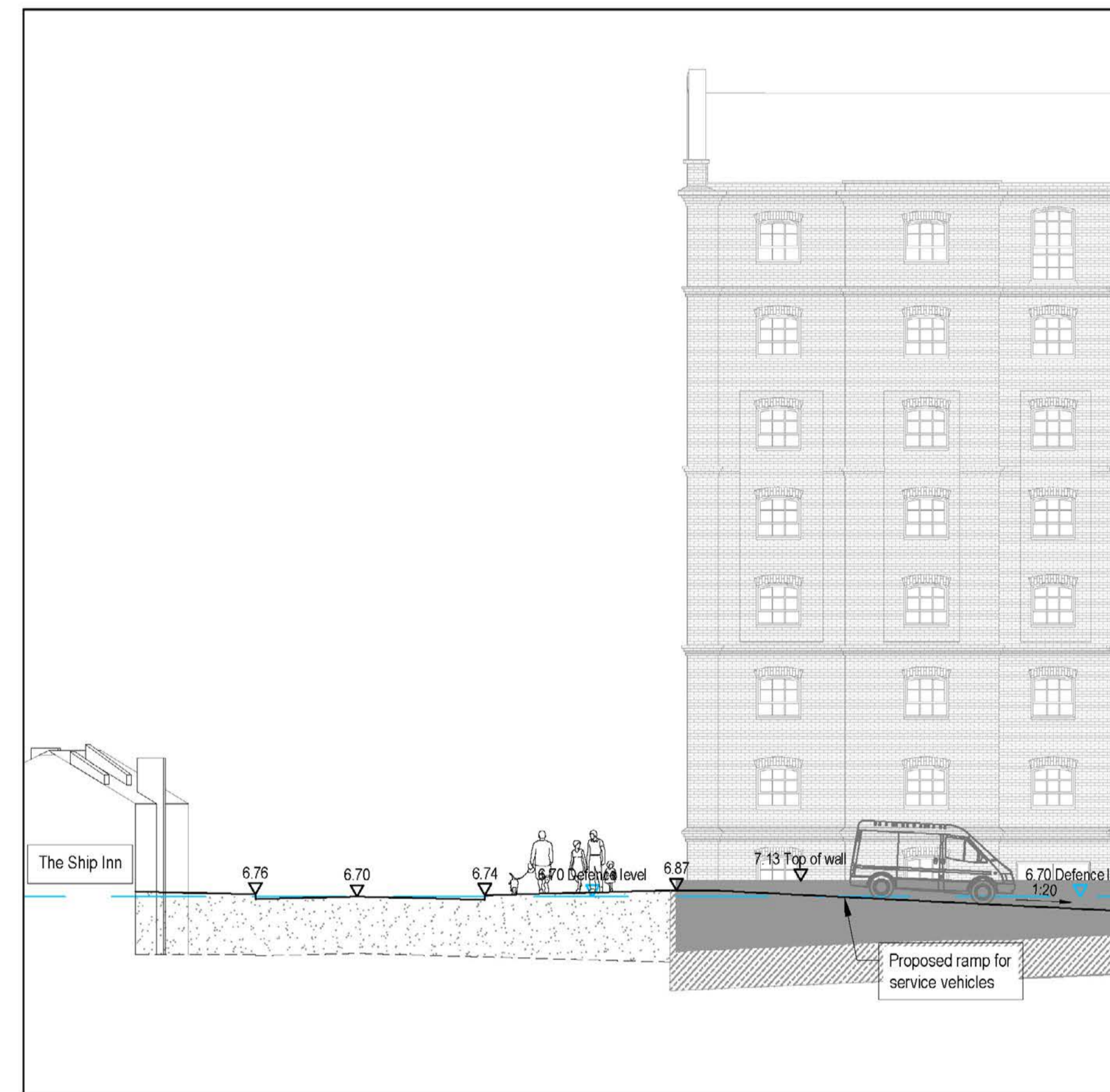
SECTIONS A A TO E E - PLAN VIEW



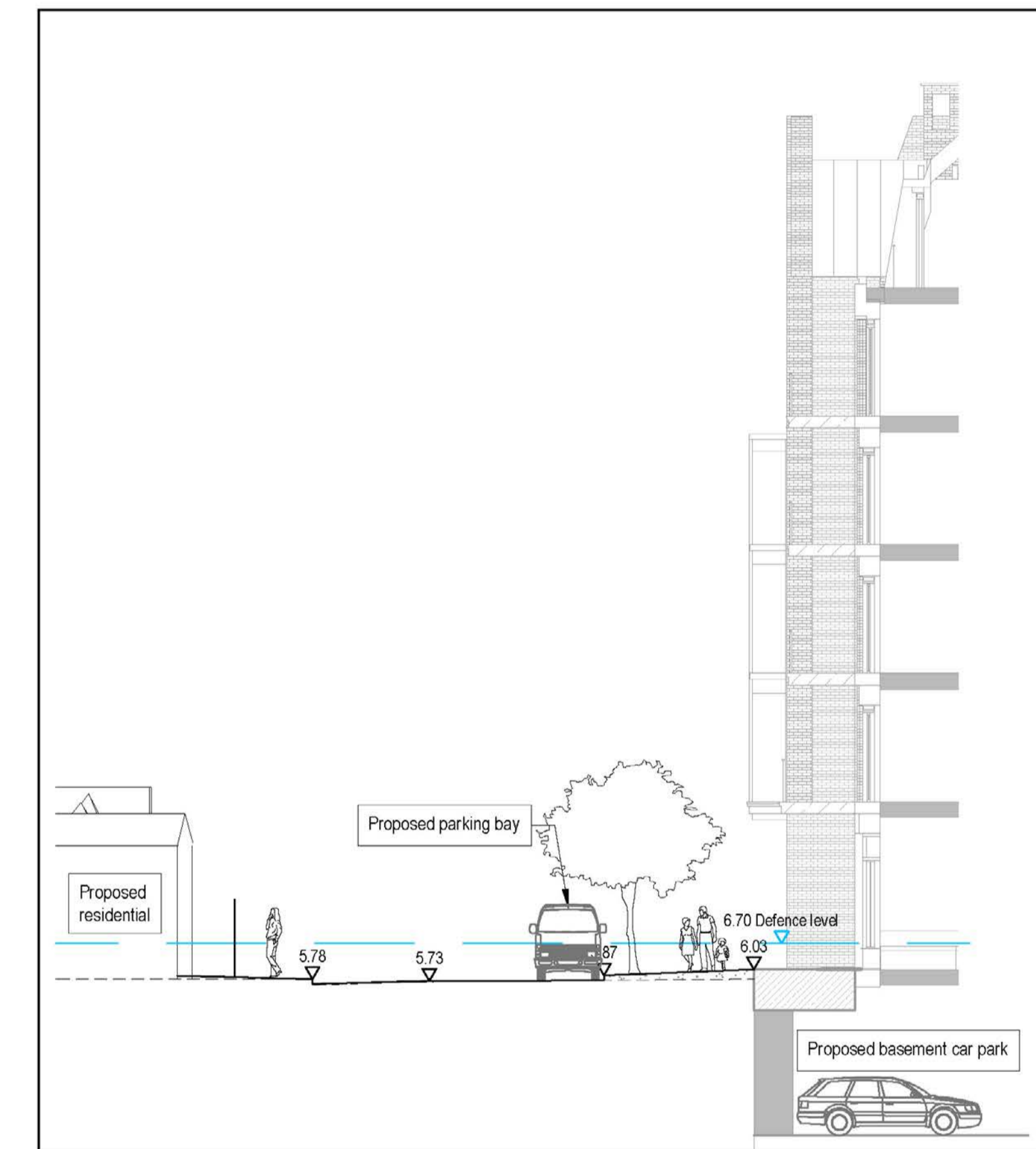
SECTION B B - FUTURE



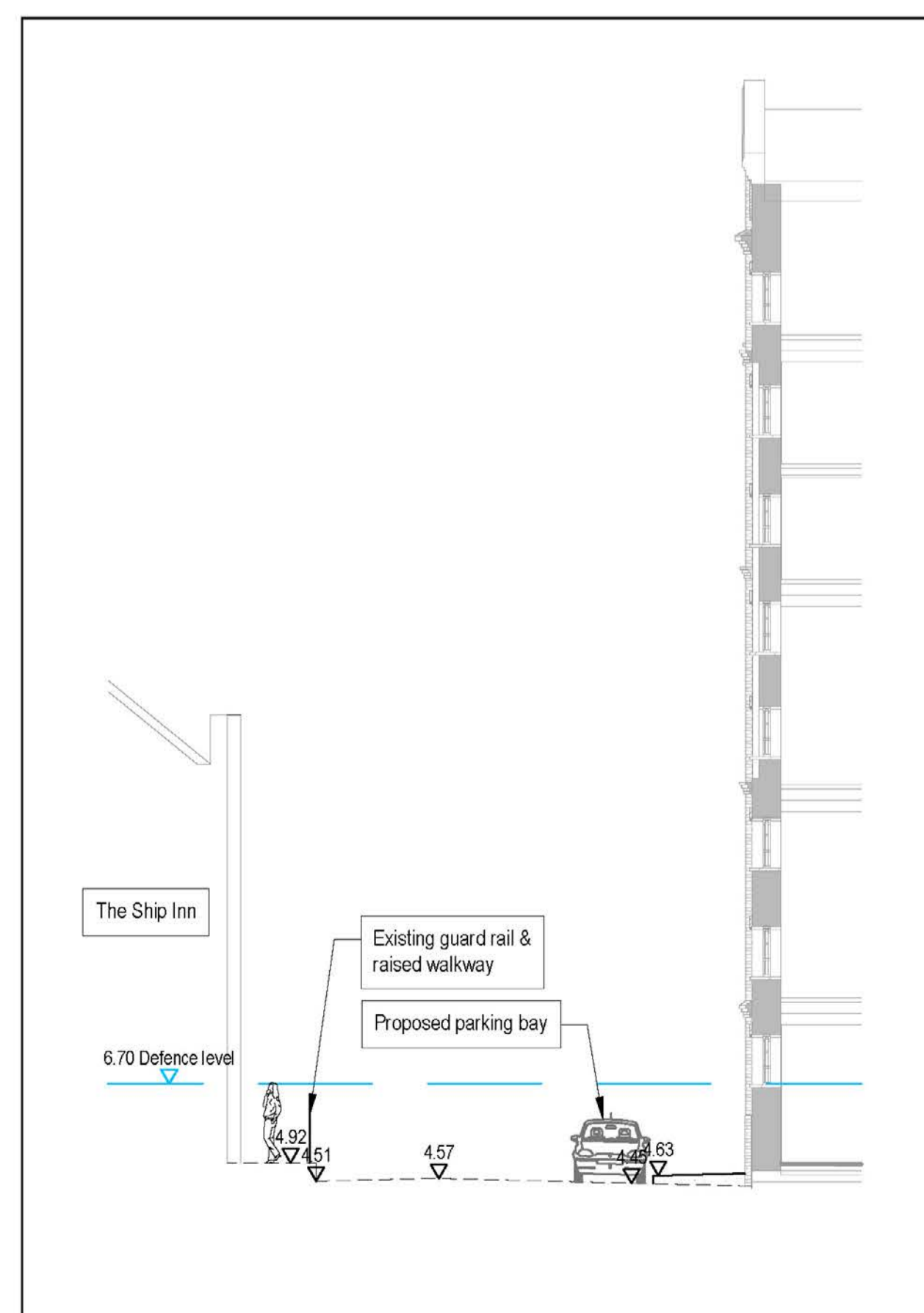
SECTION C C - FUTURE



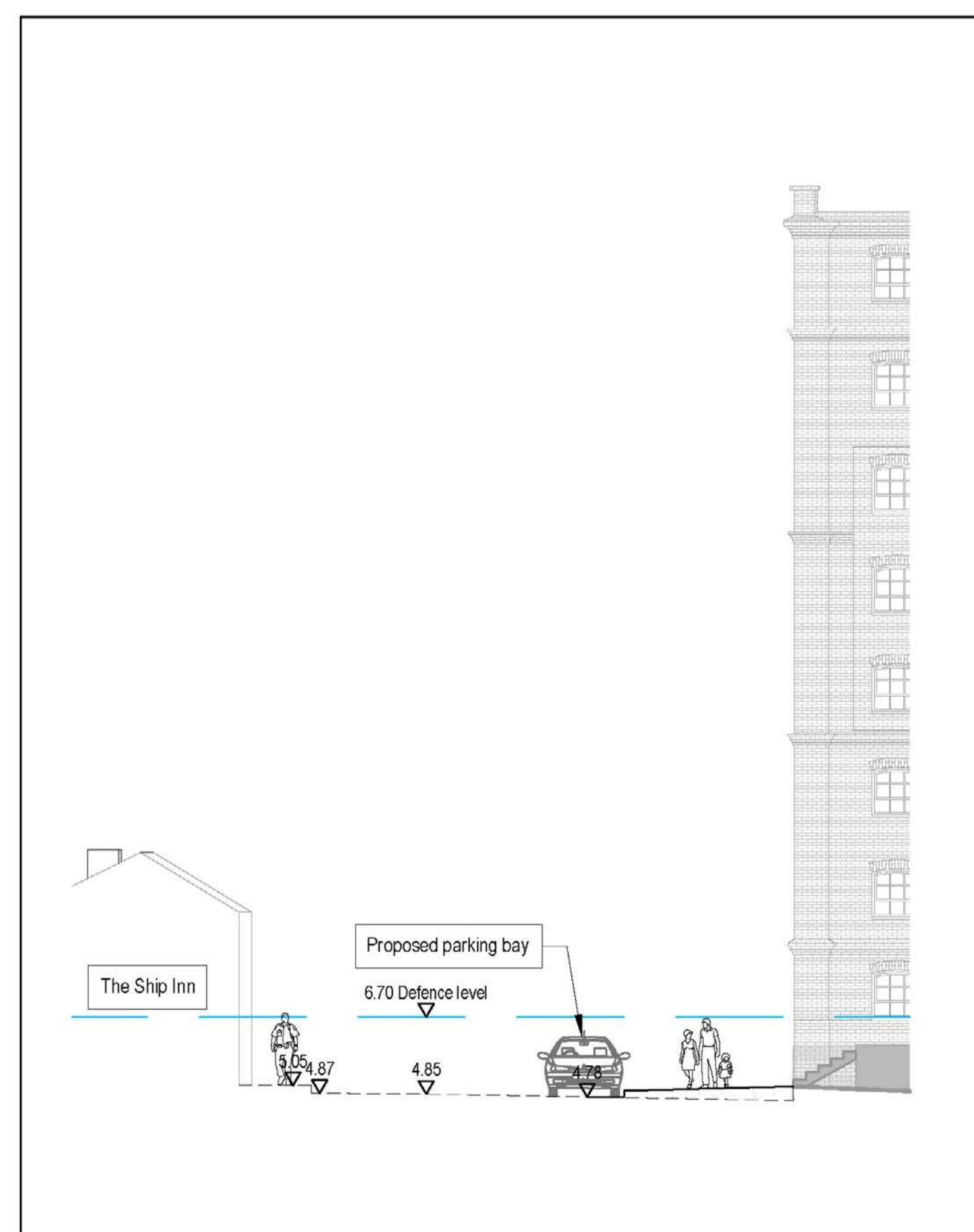
SECTION D D - FUTURE



SECTION E E - FUTURE



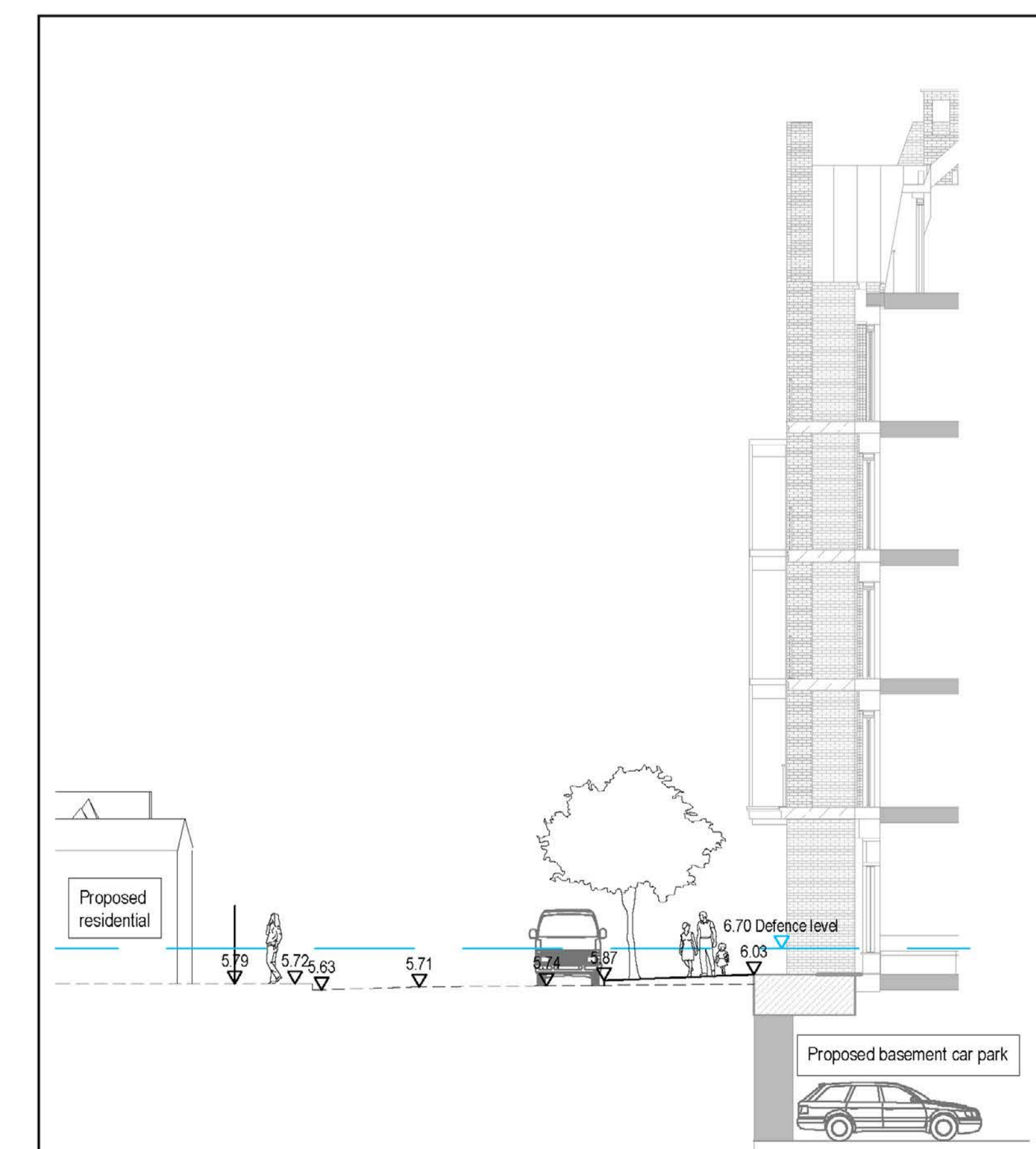
SECTION B B - EXISTING GROUND



SECTION C C - EXISTING GROUND



SECTION D D - EXISTING GROUND



SECTION E E - EXISTING GROUND

Mark	Revision	Date	Drawn	Chkd	Appd
A	Labelling revised	07.01.19	REM	MB	MB

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Drawing Issue Status: **FOR INFORMATION**

STAG BREWERY, MORTLAKE
 SHIP LANE
 POSSIBLE GROUND PROFILES FOR
 FLOOD DEFENCE MEASURES (SHEET 2 OF 2)

Client			
RESELTON PROPERTIES			
Date of 1st Issue	Designed	Drawn	
20.12.2018	REM	REM	
As Scale	Checked	Approved	
1:125	RAP	RAP	
Drawing Number	Revision		
38262/5501/098	A		





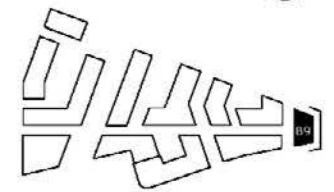
F. Updated Defence Drawings – Bulls Alley and the Boat House

Appendices

River Wall Environment Agency Comments
WIE10667-103-BN-7-2-1-EA
WIE10667

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KEY

- 01. BRICK WALLS
- 02. METAL CLAD ROOF
- 03. HORIZONTAL CONCRETE BAND
- 04. CLEAR GLAZING WITH BRONZE ANODIZED ALUMINIUM FRAMES
- 05. CLEAR GLAZING WITH BRONZE ANODIZED ALUMINIUM FRAMES
- 06. GLASS BALUSTRADE
- 07. METAL BALUSTRADE
- 08. TEXTURED BRICK DETAIL
- 09. PROFILED METAL CLADDING
- 10. BRONZE ANODIZED ALUMINIUM PROFILE
- 11. COLOURED MOSAIC TILES
- 12. CURTAIN WALL
- 13. PRE-CAST CONCRETE CLADDING
- 14. DECORATIVE FRIEZE
- 15. FACIA SIGNAGE
- 16. OBTUSE GLAZING
- 17. ANODIZED ALUMINIUM SLIDING DOORS



Revision description	Date	Check	Rev
DESIGN STUDY	11/12/16		F
THIRD DRAFT PLANNING APPLICATION	04/01/17	DJ	C
SUBMITTED SC	21/11/17	BJ	D
SECOND DRAFT PLANNING APPLICATION	09/11/17	BJ	C
FINAL ELEVATION ISSUE	14/09/17	BJ	B
FIRST DRAFT PLANNING APPLICATION	12/10/17	DJ	A
FIRST DRAFT ELEVATION ISSUE	14/09/17	KHA	-

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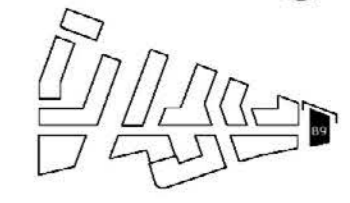
Project
Stag Brewery
Richmond

Drawing
BUILDING 09 - PROPOSED EAST ELEVATION

Drawn	Date	Scale
NLe	14/09/17	1:100 @ A4 1:200 @ A3
Job Number	Drawing number	Revision
16019	G200 B09 E E_001	F

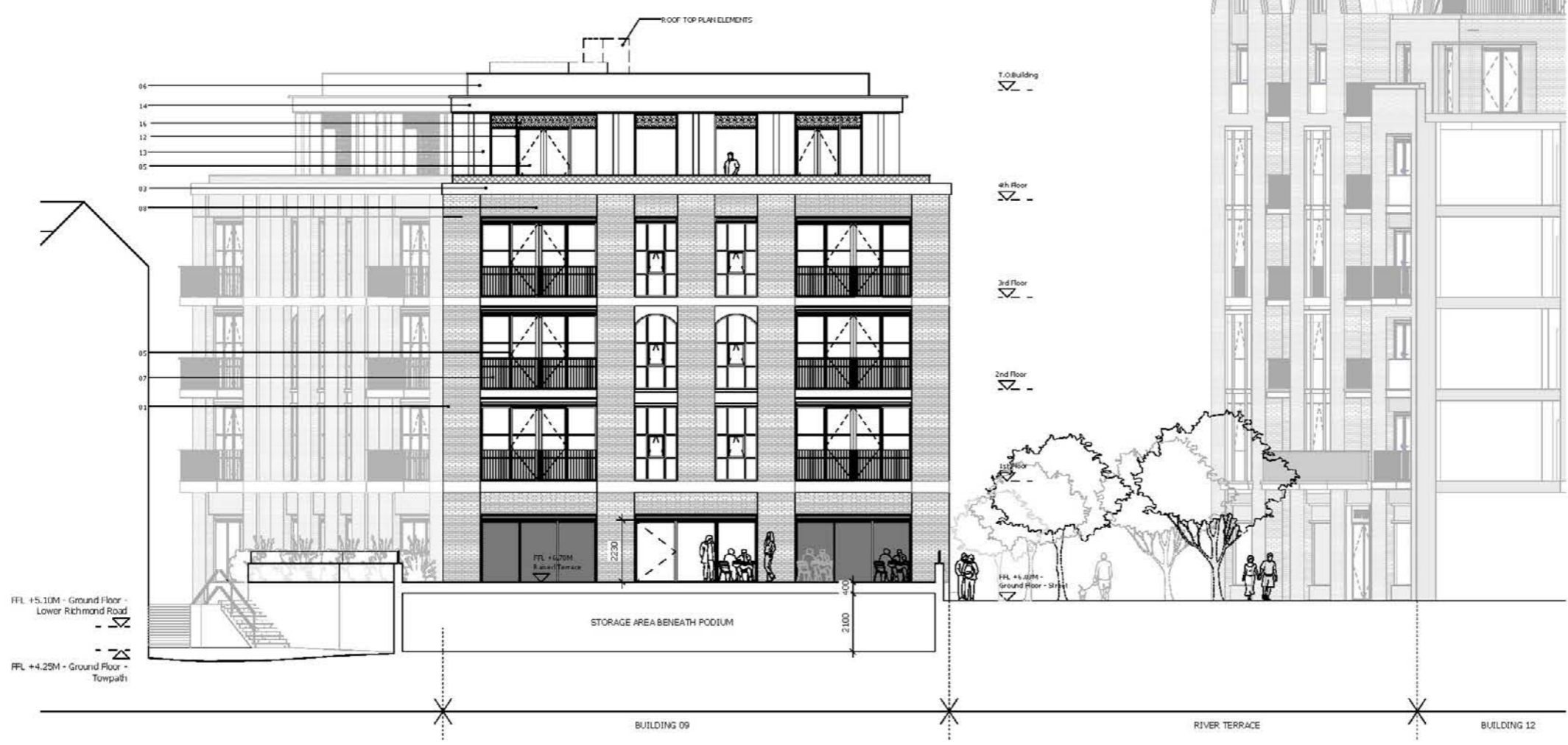
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KEY

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- 02. METAL CLAD ROOF
- 03. HORIZONTAL CONCRETE BAND
- 04. CLEAR GLAZING WITH GREY OPC ALUMINIUM FRAMES
- 05. CLEAR GLAZING WITH BRONZE ANODIZED ALUMINIUM FRAMES
- 06. GLASS BALUSTRADE
- 07. METAL BALUSTRADE
- 08. TEXTURED BRICK DETAIL
- 09. KNOBBLED METAL CLADDING
- 10. BRONZE ANODIZED ALUMINIUM PROFILE
- 11. COLOURED MOSAIC TILES
- 12. CURTAIN WALL
- 13. PRE-CAST CONCRETE CLADDING
- 14. DECORATIVE FRIEZE
- 15. FACIA SIGNAGE
- 16. OSCURE GLAZING
- 17. ANODIZED ALUMINIUM SLIDING DOORS



Revision description	Date	Check	Rev
DESIGN STUDY	11/12/16		P
THIRD DRAFT PLANNING APPLICATION	04/01/17	DJ	C
SCHWABO SC	21/11/17	BJ	D
SECOND DRAFT PLANNING APPLICATION	09/11/17	BJ	C
FINAL ELEVATION ISSUE	24/09/17	BJ	B
FIRST DRAFT PLANNING APPLICATION	12/10/17	DJ	A
FIRST DRAFT ELEVATION ISSUE	14/09/17	KH	-

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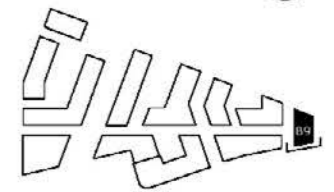
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BUILDING 09 - PROPOSED NORTH ELEVATION

Drawn	Date	Scale
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Job Number	Drawing number	Revision
16019	G200 B09 E N 001	F



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KEY

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- 02. METAL CLAD ROOF
- 03. HORIZONTAL CONCRETE BAND
- 04. CLEAR GLAZING WITH BRONZE ANODIZED ALUMINIUM FRAMES
- 05. CLEAR GLAZING WITH BRONZE ANODIZED ALUMINIUM FRAMES
- 06. GLASS BALUSTRADE
- 07. METAL BALUSTRADE
- 09. TEXTURED BRICK DETAIL
- 09. PROFILED METAL CLADDING
- 10. BRONZE ANODIZED ALUMINIUM PROFILE
- 11. COLOURED MOSAIC TILES
- 12. CURTAIN WALL
- 13. PRE-CAST CONCRETE CLADDING
- 14. DECORATIVE FRIEZE
- 15. FACIA SIGNAGE
- 16. OSCURE GLAZING
- 17. ANODIZED ALUMINIUM SLIDING DOORS



Revision description	Date	Check	Rev
DESIGN STUDY	11/12/16		P
THIRD DRAFT PLANNING APPLICATION	04/01/17	DJ	C
SCHEMATIC	21/11/17	BJ	D
SECOND DRAFT PLANNING APPLICATION	09/11/17	BJ	C
FINAL ELEVATION ISSUE	14/09/17	BJ	B
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FIRST DRAFT ELEVATION ISSUE	14/09/17	KH	-

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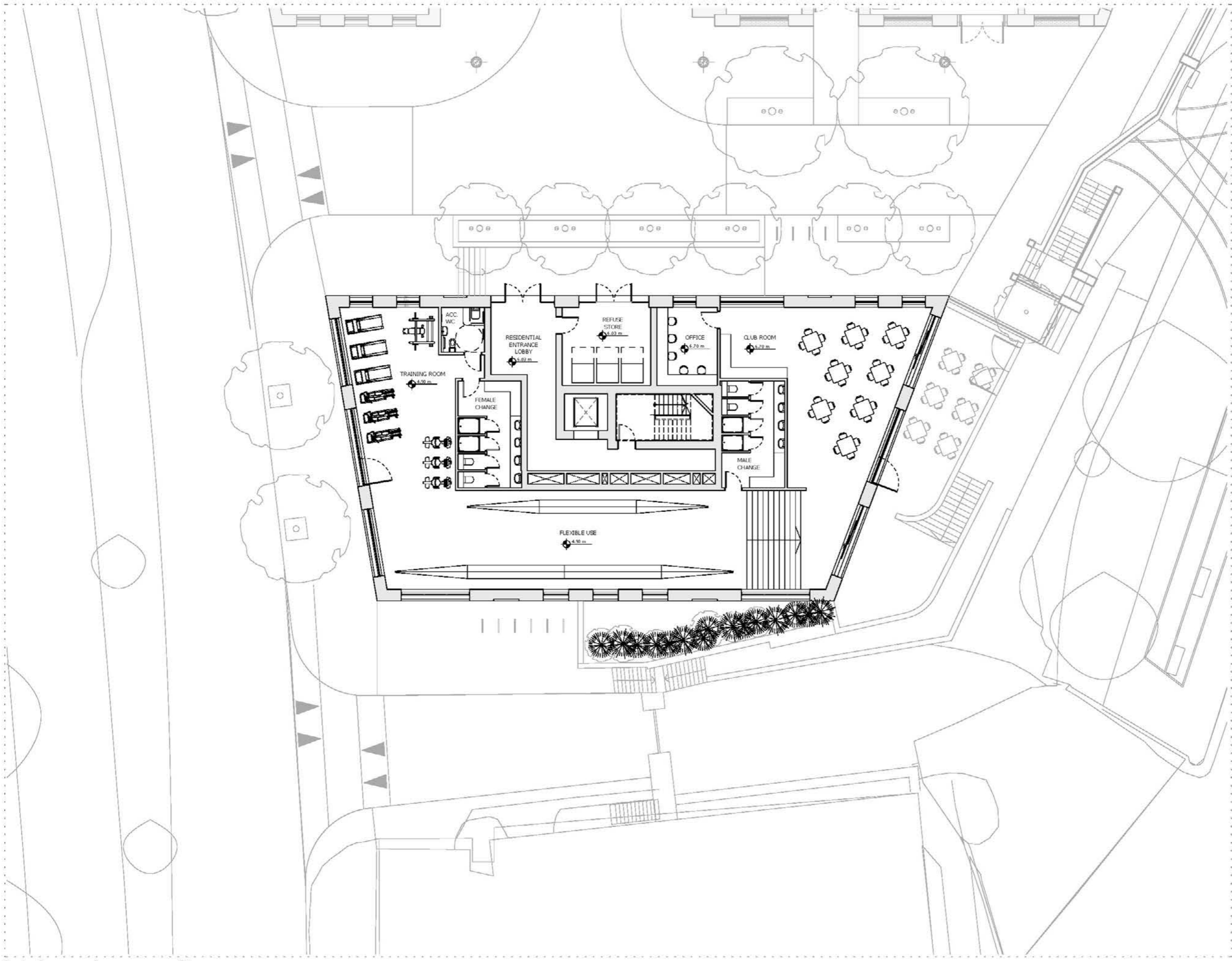
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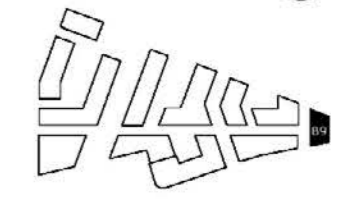
Project
Stag Brewery
Richmond

Drawing
BUILDING 09 - PROPOSED SOUTH ELEVATION

Drawn	Date	Scale
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Job Number	Drawing number	Revision
16019	G200 B09 E S 001	F



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DESIGN STUDY	11/12/16	L
FINAL DRAFT PLANNING APPLICATION	18/01/18	B3 K
THIRD DRAFT PLANNING APPLICATION	04/01/18	B3 J
SCENARIO 5C	21/11/17	D3 H
SECOND DRAFT PLANNING APPLICATION	09/12/17	B3 G
ISSUE TO DESIGN TEAM	24/11/17	B3 F
ISSUE TO DESIGN TEAM	22/10/17	D3 E
FIRST DRAFT PLANNING APPLICATION	12/10/17	B3 D
SCENARIO 4a	27/09/17	B3 C
SCENARIO 4	12/09/17	B3 B
SCENARIO 2 DESIGN FREEZE	09/09/17	D3 A
SCENARIO 1 BASELINE SCHEME	26/07/17	B3 -

Revision description	Date	Check	Rev
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Drawing
BUILDING 09 - PROPOSED GROUND FLOOR PLAN

Drawn	Date	Scale
KH	25/07/17	1:100 @ A3 1:200 @ A4
Job Number	Drawing number	Revision
16019	G200 B09 P 00 002	L

G. Drainage Strategy Addendum