

Proposed Surface Water Drainage Strategy Report
GHX001 | Site Infrastructure
Garth Wymott 2

608623-0000-PEV-GHX001 | -ZZ-RP-C-0503

Issue Number P04

S3 – Suitable for Review and Comment

04/08/2021



Ministry of
JUSTICE

Security Classification:

OFFICIAL

Document History

Issue	Date	Comment	Author	Chk'd
P01	09/04/2021	First issue. S3 – Review and Comment	PCA	MHA
P02	18/06/2021	Boiler House and Bowls Club update.	PCA	MHA
P03	09/07/2021	Minor changes following comments.	PCA	MHA
P04	04/08/2021	Minor change to references in report.	PCA	MHA

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1.0 Introduction

This Surface Water Drainage Strategy Report has been produced to support the proposed development at Garth Wymott 2, and informs the hybrid planning application seeking: Outline planning permission (with all matters reserved except for access, parking and landscaping) for a new prison (up to 74,531.71 sqm GEA) (Class C2A) within a secure perimeter fence following demolition of existing buildings and structures and together with associated engineering works; Outline planning permission for a replacement boiler house (with all matters reserved except for access); and Full planning permission for a replacement bowling green and club house (Class F2(c)).

The site address/description for the whole application/ scheme is: Land adjacent to HMP Garth and HMP Wymott, Leyland.

The site location for each element is:

- New prison is: Land to the north of HMP Wymott
- New bowling green and club house is: Land to the south of HMP Wymott
- New boiler house is: Land between HMP Wymott and HMP Garth

The indicative site layout proposes a range of buildings and facilities typical of a Category C resettlement prison, including:

- Seven new houseblocks each accommodating up to 245 prisoners (1,715 prisoners in total), totalling c.53,472 sqm GEA
- Supporting development including kitchen, workshops, kennels, Entrance Resource Hub, Central Services Hub and support buildings, totalling c. 21,060 sqm GEA
- Ancillary development including car parking (c. 525 spaces), internal road layout and perimeter fencing totalling 1326 linear meters enclosing a secure perimeter area of 10.5 ha

The application site comprises 43.53 ha of land.

Individual site areas for each element:

- New prison = 18.4 ha
- Bowling club = 0.63 ha
- Boiler house = 0.23 ha
- Wider site area for Biodiversity Net Gain improvement within the RLB = 24.27 ha

The house blocks will be four storeys (plus pitched roof) in height, whilst the other buildings will range from one to three storeys.

The new prison will be designed and built to be highly sustainable and to exceed local and national planning policy requirements in terms of sustainability. MoJ's aspirations include targeting near zero carbon operations, 10% biodiversity net gain, and at least BREEAM 'Excellent' certification, with endeavours to achieving BREEAM 'Outstanding'.

Parameters for the bowling club include:

- Single storey in height
- Floorspace = 72 sqm GEA
- Car parking spaces = 37 no

Parameters for the boiler house include:

- Footprint of boiler house and associated service yard = Approximately 14m x 41m
- Height = Approximately 9m
- Combined flue height = Approximately 22m

The report has been produced in accordance with the DEFRA Guide, Non-Statutory Technical Standards for Sustainable Drainage Systems and the requirements of the National Planning Policy Framework (NPPF).

In addition, the following policy from the Central Lancashire Core Strategy is applicable to the surface water drainage and SuDS proposals for this site;

- CLCS Policy 29: Water Management – Improve water quality, water management and reduce the flood risk by minimising the use of water in new developments, working with the regional water company, pursuing opportunities to improve the sewer infrastructure, managing the capacity and timing of development to avoid exceeding sewer capacity, encouraging the adoption of SuDS and seeking to maximise the potential of Green Infrastructure to contribute to flood relief.

2.0 Site Description

2.1 Existing Site

The proposed site is located north of the village of Ulnes Walton, adjacent to the existing HMP Garth and HMP Wymott sites, The proposed works are divided into three interlinked elements;

- The Main Site
- The Bowls Club
- The Boiler House

Details for each element are provided in the section below.

2.1.1 The Main Site

The proposed Main Site is divided into three sub-areas, as detailed below;

- Area 1 - The largest section of the site is located to the north of the existing HMP Wymott site, and the east of the existing HMP Garth site. Pump House Lane forms the eastern boundary, with a small

residential area beyond, and to the north lies open fields. This section of the site is approximately square.

- Area 2 – The mid-sized section of site lies to the east and north of the existing HMP Wymott site. Moss Lane forms the eastern boundary, and to the north lies Willow Road with a small residential area beyond.
- Area 3 – The smallest section of site lies to the east of Pump House Lane. To the west lies Area 1, detailed above, and to the east and north lie open fields. A small residential area lies to the south.

A number of surface water ditches run through the site area, and a United Utilities foul water pumping station is located within Area 1, accessed off Pump House Lane. The rising main from the pumping station runs to the north, following the route of Pump House Lane.

Pump House Lane is an unadopted road, leading from Willow Road, which is adopted. Moss Lane is also part of the adopted highway network.

A review of the topographical survey indicates minimal level change across the site, with a maximum of 2m level difference across the east-west axis and minimal level change north to south.

2.1.2 The Bowls Club

An existing outdoor bowls club is currently located off Pump House Lane, comprising a bowls green, clubhouse and associated car parking area. This facility lies within the proposed footprint of the new development, and as such it will be re-located as part of the overall project works.

2.1.3 The Boiler House

An existing Boiler House facility, which serves the existing HMP Garth and HMP Wymott facilities, is located within the proposed footprint of the new development. The Boiler House will also be re-located as part of the overall project works.

2.2 Proposed Site

2.2.1 The Main Site

The Main Site is to be developed to provide a new Category C Re-Settlement prison. Accommodation will be provided in 7 houseblocks, with a number of additional support buildings providing all necessary facilities. While there will be a requirement for site roads, and areas of hardstanding, there will also be areas allocated to planting and green spaces. The proposed site layout plan has been used to develop the proposed surface water drainage strategy, which is shown on the drawing in the Appendix.

For clarity and reference in the text below, the proposed site has been split into two areas;

- Northern Section – housing the 7 houseblocks and the support/ancillary buildings.
- Southern Section – housing the site car park.

The Northern Section occupies Area 1 and Area 3 described in 2.1 above, and the Southern Section occupies Area 2.

In order to combine Area 1 and Area 3, and facilitate a much-improved overall site layout, realignment of Pump House Lane will be required. Initial discussions have been held with Lancashire County Council Highways Department regarding this proposal which has been accepted in principle, and will be progressed in subsequent project stages.

A new access to the site will be taken off Moss Lane.

2.2.2 The Bowls Club

A new location for the bowls club has been defined, to the south of the existing HMP Wymott site. This location is well served by the existing local road network, although further works will be undertaken to the local footpaths to improve pedestrian access. The site will comprise a new bowling green, and further buildings to provide social meeting space, and storage room for equipment. A new car park area will also be provided, along with a new access from the adjacent (unnamed) road.

2.2.3 The Boiler House

The new Boiler House is to be located in an area currently occupied by a car park and portacabin office facility, which lies directly between the existing HMP Garth and HMP Wymott. The site is accessed from an unadopted road, which forms the current access to the existing Boiler House.

As part of the works, the car park and portacabin office are to be relocated a short distance to the south of the current position.

3.0 Surface Water Drainage Strategy

3.1 Existing Surface Water Drainage

3.1.1 The Main Site

The existing site is predominantly greenfield land, with a number of surface water ditches that cross the site. The interconnectivity of the ditches, and the outfall point, is not fully confirmed at this stage, however further investigations and ongoing discussions are underway with the Lead Local Flood Authority to resolve this.

A number of existing surface water ditches will require realignment in order to facilitate the proposed development.

Initial Greenfield run-off rates have been calculated for the main Garth Wymott 2 development site, and are included in the table below.

Table 1 – Greenfield Run-off Calculations

Return Period (Years)	Greenfield Discharge Rate (l/s)
QBar	129
1	112
30	220
100	269

3.1.2 The Bowls Club

Analysis of the available information for the surface water drainage in this area indicates that the surface water runoff from the building discharges directly to ground, or to one of the nearby surface water ditches. All existing piped drainage will be abandoned, and either removed or fully grouted up and sealed, as part of the development works.

3.1.3 The Boiler House

Analysis of the available information indicates that the surface water runoff from the building discharges directly to ground, or to one of the nearby surface water ditches. All existing piped drainage will be abandoned, and either removed or fully grouted up and sealed, as part of the development works.

The site for the relocated Boiler House is adjacent to an existing surface water drain.

3.2 SuDS Introduction

The SuDS hierarchy requires that surface water run-off is controlled and preferably re-used wherever possible. In the event that it cannot be re-used it should be disposed of to a receptor in the order described in the Building Regulations Approved Document Part H and CIRIA C753 The SuDS Manual 2015:

- Via infiltration,
- To watercourse, and finally,
- To sewers.

3.3 SuDS Strategy

Surface water run-off should preferably be discharged via infiltration. The initial ground investigation results suggests that soakaways are unlikely to be a suitable solution at this site. However, further ground investigation works are proposed, in order to determine the suitability of this option and all further options outlined as part of the surface water drainage strategy.

For the Main Site, Bowls Club and Boiler House, it is anticipated that surface water flows will be discharged via connections to both existing and re-aligned surface water ditches, drainage, or ponds adjacent to the site. A Pre-Development Enquiry has been submitted to the Lead Local Flood Authority, to initiate discussions regarding the surface water drainage proposals for this site. Attenuation is likely to be required, which can take many forms, including below ground cellular storage tanks, and also surface level ponds and detention tanks.

CIRIA C753 requires that surface water run-off is treated to improve the quality of the discharge water so that it does not negatively impact on the quality of the receiving watercourse or groundwater. Flows from roofs generally require a single stage of treatment, whereas flows from roads, car parks and yard areas generally require two stages of treatment.

The table below discusses types of SuDS (taken from C753), and whether they might be utilised at this site, to provide a contribution to either attenuation and/or treatment of the surface water flows. The final choice of SuDS treatment train elements will be confirmed at the detailed design stage.

3.4 SuDS Strategy Site Assessment

SuDS Component	Site Suitability	Comments
Green roofs	✓	Potential to be used to provide at source treatment and control, subject to financial viability, M&E plant requirements, and building form.
Soakaways	✓	May be suitable, depending on ground conditions.
Rainwater harvesting systems	✓	Potential to be utilised for W.C. flushing etc. to reduce the use of potable water for the development, subject to client approval and acceptance.
Filter strips	✓	Potential to be used to convey surface water flows from footpaths and road adjacent soft landscaping.
Filter trenches	✓	Potential to be used to convey surface water flows from footpaths and road adjacent soft landscaping.
Infiltration trenches	✓	Potentially suitable, depending on ground conditions and space availability.
Swales	✓	Potentially suitable to convey surface water flows from footpaths and roads adjacent soft landscaping.
Bioretention	✓	Potential to be used to convey surface water flows from footpaths and road adjacent soft landscaping.
Pervious pavements	✓	Potential to be used for collection, attenuation

		and discharge of the surface water flows from the car park areas.
Geocellular systems	✓	Suitable to be used for attenuation and discharge of surface water run-off.
Infiltration basins	✓	Potentially suitable depending on ground conditions.
Attenuation basins	✓	As Infiltration Basins above.
Ponds	✓	As Infiltration Basins above.
Stormwater wetlands	✓	As Infiltration Basins above.
Proprietary Devices	✓	Not preferred due to ongoing maintenance requirements but can provide suitable treatment if required.
Rain gardens	✓	Could be utilised to prevent run-off from small events leaving the site.

3.5 Surface Water Drainage Strategy

An outline surface water drainage strategy drawing has been developed for the Main Site, Bowls Club and Boiler House, and is included in the Appendix to this report. Details are provided in the following report sections.

3.5.1 Main Site - Southern Section Surface Water Drainage

The Southern Section Network drains surface water runoff from the car park and access road area. The proposals currently include for the runoff to discharge to an attenuation basin, and from there, flows are to be conveyed into the existing surface water drainage that serves an existing small building at the south of this area. Sections of the car park are to be permeable, either draining directly to ground or collected for discharge to the drainage described above. The proposed attenuation basin is to be designed to retain a permanent depth of standing water, to deliver ecological benefits.

If the existing surface water drainage is not a viable discharge point, the alternative is to discharge into the surface water drainage network serving the Northern Section of the site, as detailed below.

3.5.2 Main Site - Northern Section Surface Water Drainage

The existing site is largely level, and contains a number of surface water ditches. All existing cross-site ditches are to be diverted via new below ground pipework around the site, to facilitate the development. However, all existing surface water ditches at the boundary of the site are to be retained wherever possible.

These ditches present a potential option for the discharge of surface water runoff. However, analysis of the proposed water levels within the ditches, and the existing site levels, indicate that a gravity connection to the ditches is unlikely to be possible from the entire site area. Therefore, the current proposals include for

a pumping station to receive all surface water flows from the site, and to pump these to the surface water ditches.

Pumping of surface water runoff should only be considered if no other options are available. However, this option is included at this stage of the project as a “worst case”. Further analysis of the proposed site investigation results will be undertaken, when available, to confirm whether any alternative options are viable. In addition, further surveys of the surface water ditches, including invert levels, water levels and connectivity will be required to confirm final proposals. Further updates will be provided in subsequent project stages.

3.5.3 Bowls Club

Surface water runoff from the new buildings will be collected via RWPs, discharging into a new below ground surface water drainage network. The current proposals for the car park include for a combination of gullies and permeable paving with integral tanked attenuation storage. Specialist drainage will be provided for the bowls green, likely comprising a network of permeable land drains. Runoff flows from the bowls green, car park and buildings will converge into a single drain, which is currently proposed to discharge to a nearby pond. Appropriate levels of pre-treatment will be provided to all runoff prior to discharge.

3.5.4 The Boiler House

Surface water runoff from the roof and hardstanding areas associated with the relocated Boiler House will be conveyed via a new below ground gravity network, to discharge to an adjacent surface water ditch. Flows will be attenuated via a below ground attenuation storage facility, with hydrobrake control, to limit peak discharge to pre-development values.

Due to the presence of oil stores, an appropriate bund will be provided to contain any potential spillage, and surface water runoff from this will pass through a full retention separator prior to discharge to the surface water ditch.

Surface water runoff from the relocated car park and portacabin office facility will be conveyed via a new below ground surface water network, to discharge into an adjacent surface water drain. Permeable paving will be included within the car park design, to provide attenuation and treatment to the surface water flows. Discharge rates will be limited to pre-development values via flow control and attenuation storage.

4.0 Conclusions

An outline surface water drainage strategy drawing has been prepared for the Main Site, Bowls Club, and Boiler House, which includes the principles of SuDS into the surface water drainage design. Further details will be provided in subsequent project stages and a future reserved matters application.

Appendix A

Main Site:

608623-0000-PEV-GHX001 I-ZZ-DR-C-051 I - Proposed Surface Water Drainage Strategy

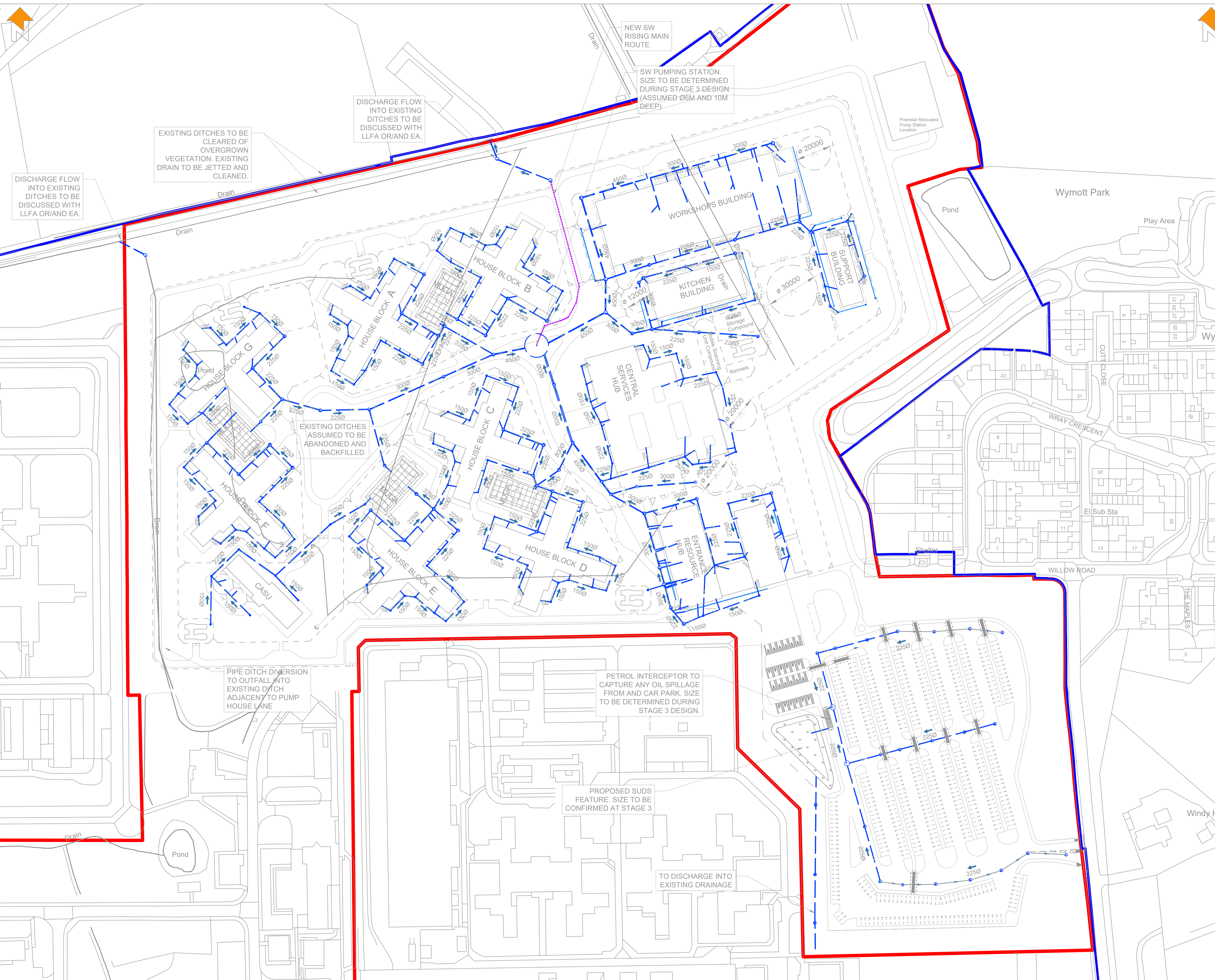
Bowls Club:

608623-0000-PEV-GHX003 I-ZZ-DR-C-0500 - Proposed Surface Water Drainage Strategy

Boiler House:

608623-0000-PEV-GHX002 I-ZZ-DR-C-0502_Proposed Surface Water Drainage Strategy-Relocated Car Park

608623-0000-PEV-GHX002 I-ZZ-DR-C-0501 _Proposed Surface Water Drainage Strategy-Boiler House



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- NOTES:**
- ALL DRAINAGE WORKS TO BE CONSTRUCTED TO DESIGN AND CONSTRUCTION GUIDANCE FOR FOU, AND SURFACE WATER SEWERS, BUILDING REGULATIONS PART H, MOJ TECHNICAL SPECIFICATION STD/XX/SPEC/010 ISSUE 006 AND PICK EVERARD DRAINAGE SPECIFICATION
 - ALL SEWERS AND DRAINS TO HAVE A CLASS 2 BED AND SURROUND AT A DEPTH OF COVER TO PIPE SOFFIT OF LESS THAN 12m UNDER PAVED AREAS AND BUILDINGS AND 0.9m IN VERGE. IN ALL OTHER AREAS, ALL SEWERS AND DRAINS SHALL HAVE A CLASS S BED, UNLESS STATED OTHERWISE ON THE DRAWINGS.
 - ALL SEWERS TO BE BACKFILLED WITH TYPE 1 GRANULAR MATERIAL UNDER PAVED AREAS, ROADS AND HARDSTANDINGS OR AS-DUG MATERIAL IN VERGE AREAS.
 - MANHOLE COVERS AND FRAMES WITHIN VEHICULAR LOADED AREAS TO BE D400 RATED AND C250 IN ALL OTHER AREAS TO BS EN 124-1994. ALL COVERS TO BE DUCTILE IRON.
 - RWP LOCATIONS AND SETTING OUT TO BE PROVIDED BY ARCHITECTS. SVP LOCATIONS AND SETTING OUT TO BE PROVIDED BY MECHANICAL ENGINEER. CURRENTLY THEY ARE ONLY INDICATIVE.
 - DRAINAGE SYSTEM TO BE SUBJECT TO INSPECTION INTERIM AND FINAL TESTS IN ACCORDANCE WITH MOJ TECHNICAL SPECIFICATION STD/XX/SPEC/010 ISSUE 6 AND BS EN 75
 - ALL PIPEWORK
 - PVC WITH FLEXIBLE MECHANICAL JOINTS TO BS EN 295-1 AND BS 65 UP TO 600mm DIAMETER
 - OVER 600mm - CONCRETE TO BS EN 1916 AND 1911
 - BELOW CONCRETE FLOOR SLABS - CAST IRON TO BS 437 OR DUCTILE IRON TO BS 598
 - ALL FLOW CONTROL MANHOLES TO BE BUILT AS PER MANUFACTURER DETAILS AND TO INCLUDE SUMP
 - CATCHPITS (CHAMBERS) (CP) TO BE PROVIDED UPSTREAM OF ATTENUATION TANKS AND OIL SEPARATORS
 - ROAD DRAINAGE IS NOT SHOWN. TO BE DEVELOPED IN SUBSEQUENT STAGES
 - PIPE DIAMETERS TO BE CONFIRMED DURING STAGE 3 DESIGN - CURRENTLY SHOWN AS INDICATIVE ONLY.

- KEY:**
- PROPOSED SURFACE WATER SEWER
 - PROPOSED CHANNEL DRAINS
 - PROPOSED SITE BOUNDARY
 - - SW INSPECTION CHAMBER
 - - SW ACCESS CHAMBER (MANHOLE)
 - SURFACE WATER RISING MAIN
 - EXISTING DITCH DIVERSION
 - EXISTING DITCH AS PER OS MAP CURRENTLY ASSUMED TO BE ABANDONED AND BACKFILLED

P04	2021.06.18	UPDATED SITE LAYOUT, RED LINE BOUNDARY
P03	2021.03.30	SITE LAYOUT UPDATED, ISSUED FOR OPA.
P02	2021.02.18	SUITABILITY STATUS REVISION
P01	2021.02.15	FIRST ISSUE FOR STAGE 2.
Rev	Date	Description

Project Status
 - RIBA Stage 2

Client
 Ministry of Justice
 Ministry of Justice, 102 Petty France, London, SW1H 9AJ

Project
 New Prisons Programme

Project Description / Site
 New Prisons Programme
 Garth Wymott 2

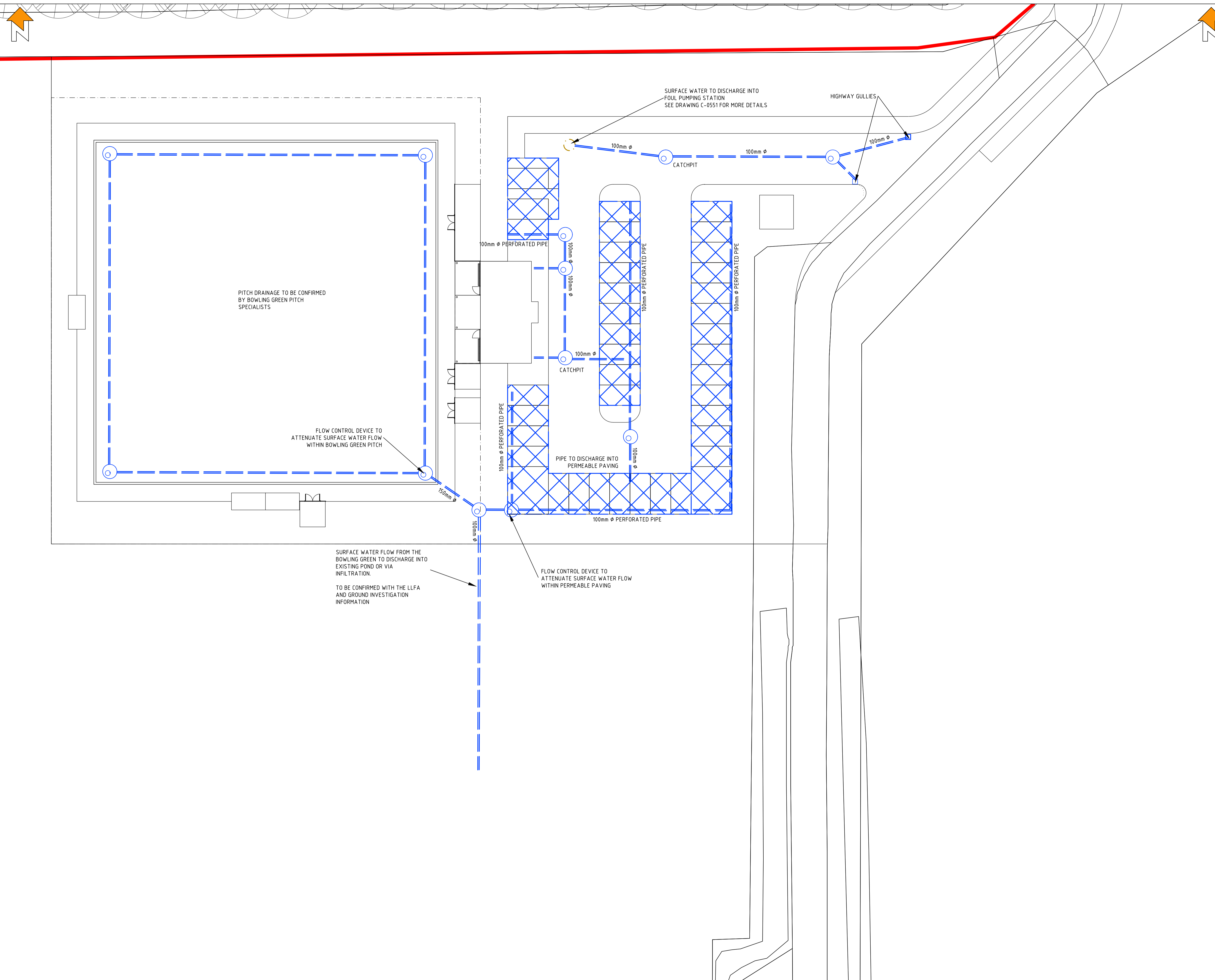
Project Address
 Site Adjacent to HMP Garth & HMP Wymott

Building Type
 Site Infrastructure

Drawing Title
 Proposed Surface Water Drainage Strategy

Originator Logo PICK EVERARD	Drawn By KJD	Date 2021.02.15
	Checked By MHA	Date 2021.02.15
	Approved By PCA	Date 2021.02.15
Drawing Number 608623-0000-PEV-GHX0011-ZZ-DR-C-0511	Delref D0100	

Sheet No. 01 of 01	Scale 1:1000	Orig. Sheet Size @ A1	Rev. P04
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 608623-0000-PEV-GHX0011-XX-HS-C-0002_Design Risk Assessment

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 N/A

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- NOTES:**
- ALL DRAINAGE WORKS TO BE CONSTRUCTED TO DESIGN AND CONSTRUCTION GUIDANCE FOR FOUL AND SURFACE WATER SEWERS, BUILDING REGULATIONS PART H, MOJ TECHNICAL SPECIFICATION STD/X/SPEC/010 ISSUE 006 AND PICK EVERARD DRAINAGE SPECIFICATION
 - ALL SEWERS AND DRAINS TO HAVE A CLASS 2 BED AND SURROUND AT A DEPTH OF COVER TO PIPE SOFFIT OF LESS THAN 12m UNDER PAVED AREAS AND BUILDINGS AND 0.9m IN VERGE. IN ALL OTHER AREAS, ALL SEWERS AND DRAINS SHALL HAVE A CLASS S BED, UNLESS STATED OTHERWISE ON THE DRAWINGS.
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 - ALL FLOW CONTROL MANHOLES TO BE BUILT AS PER MANUFACTURER DETAILS AND TO INCLUDE SUMP
 - CATCHPITS CHAMBERS (CP) TO BE PROVIDED UPSTREAM OF ATTENUATION TANKS AND OIL SEPARATORS.
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 - PIPE DIAMETERS TO BE CONFIRMED DURING STAGE 3 DESIGN - CURRENTLY SHOWN AS INDICATIVE ONLY.
 - EXISTING DRAINAGE OUTSIDE HMP WYMOTT TO BE CONFIRMED BY CONTRACTOR PRIOR TO CONSTRUCTION

- KEY:**
- PROPOSED SURFACE WATER SEWER.
 - PROPOSED CHANNEL DRAINS.
 - PROPOSED SITE BOUNDARY.
 - SW INSPECTION CHAMBER.
 - SW ACCESS CHAMBER (MANHOLE).
 - SURFACE WATER RISING MAIN
 - PROPOSED PERMEABLE PAVING
 - EXISTING DITCH AS PER OS MAP CURRENTLY ASSUMED TO BE ABANDONED AND BACKFILLED.

Rev	Date	Description
P02	2021.07.08	UPDATED FOOTPATH
P01	2021.06.10	FIRST ISSUE

Project Status
 RIBA Stage 2

Client Ministry of Justice	Project New Prisons Programme
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Ministry of Justice, 102 Petty France, London, SW1H 9AJ

Project Description / Site
 New Prisons Programme
 Garth Wymott 2

Project Address
 Site Adjacent to HMP Garth & HMP Wymott

Building Type
 Bowls Club - Site Infrastructure

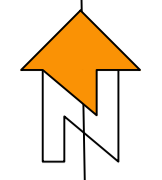
Drawing Title
 Proposed Surface Water Drainage Strategy

Originator Logo 	Drawn By KJD	Date 10.06.21
	Checked By PCA	Date 10.06.21
	Approved By PCA	Date 10.06.21

Drawing Number
 608623-0000-PEV-GHX0031-ZZ-DR-C-0500
 Delref
 D0100

Sheet No. 01 of 01	Scale 1:200	Orig. Sheet Size @ A1	Rev. P02
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 Suitability
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- SW INSPECTION CHAMBER.
- SW ACCESS CHAMBER (MANHOLE).
- EXISTING SURFACE WATER PIPE

Rev	Date	Description
P02	2021.07.09	UPDATED LAYOUT
P01	2021.06.18	FIRST ISSUE

Project Status
RIBA Stage 2

Client Project **New Prisons Programme**
 Ministry of Justice, 102 Petty France, London, SW1H 9AJ

Project Description / Site
New Prisons Programme
Garth Wymott 2

Project Address
Site Adjacent to HMP Garth & HMP Wymott

Building Type
Boiler House - Site Infrastructure

Drawing Title
Proposed Surface Water Drainage Strategy - Relocated Car Park

Originator Logo	Drawn By	KJD	Date	18.06.21
	Checked By	PCA	Date	18.06.21
	Approved By	PCA	Date	18.06.21

Drawing Number
608623-0000-PEV-GHX0021-ZZ-DR-C-0502 Delref D0100

Sheet No.	Scale	Orig. Sheet Size	Rev.
01 of 01	1:100	@ A1	P02

Data Security Classification
OFFICIAL Suitability
S3

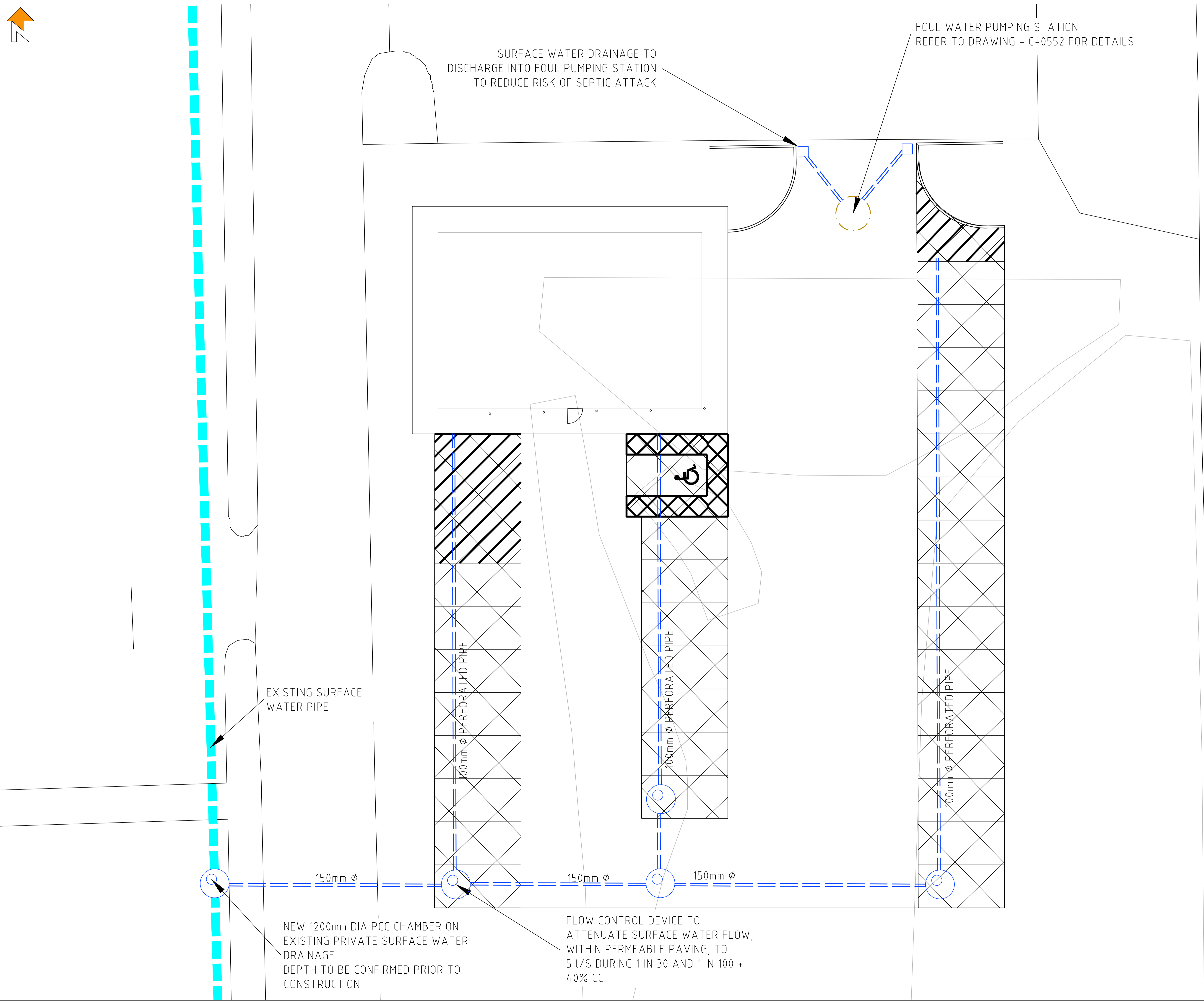
SURFACE WATER DRAINAGE TO DISCHARGE INTO FOUL PUMPING STATION TO REDUCE RISK OF SEPTIC ATTACK

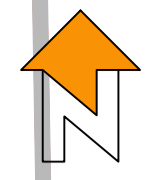
FOUL WATER PUMPING STATION REFER TO DRAWING - C-0552 FOR DETAILS

EXISTING SURFACE WATER PIPE



NEW 1200mm DIA PCC CHAMBER ON EXISTING PRIVATE SURFACE WATER DRAINAGE DEPTH TO BE CONFIRMED PRIOR TO CONSTRUCTION

FLOW CONTROL DEVICE TO ATTENUATE SURFACE WATER FLOW, WITHIN PERMEABLE PAVING, TO 5 L/S DURING 1 IN 30 AND 1 IN 100 + 40% CC





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-  This symbol identifies a Residual Risk that is recorded on the Design Risk Register and is relevant to this drawing.
 This drawing must be read in conjunction with the following project CDM documents:
 608623-0000-PEV-GHX0011-XX-HS-C-0002_Design Risk Assessment
-  This symbol identifies a Derogation that is recorded on the Derogation Schedule and is relevant to this drawing.
 This drawing must be read in conjunction with the following project Derogation documents:
 N/A





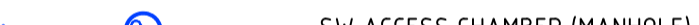

The above symbols can only be read when this drawing is in colour print

PRINT IN COLOUR

NOTES:


1. ALL DRAINAGE WORKS TO BE CONSTRUCTED TO DESIGN AND CONSTRUCTION GUIDANCE FOR FOUL AND SURFACE WATER SEWERS, BUILDING REGULATIONS PART H, MOJ TECHNICAL SPECIFICATION STD/XX/SPEC/010 ISSUE 006 AND PICK EVERARD DRAINAGE SPECIFICATION
4. ALL SEWERS AND DRAINS TO HAVE A CLASS 2 BED AND SURROUND AT A DEPTH OF COVER TO PIPE SOFFIT OF LESS THAN 12m UNDER PAVED AREAS AND BUILDINGS AND 0.9m IN VERGE. IN ALL OTHER AREAS, ALL SEWERS AND DRAINS SHALL HAVE A CLASS S BED, UNLESS STATED OTHERWISE ON THE DRAWINGS.
5. ALL SEWERS TO BE BACKFILLED WITH TYPE 1 GRANULAR MATERIAL UNDER PAVED AREAS, ROADS AND HARDSTANDINGS OR AS-DUG MATERIAL IN VERGE AREAS.
6. MANHOLE COVERS AND FRAMES WITHIN VEHICULAR LOADED AREAS TO BE D400 RATED AND C250 IN ALL OTHER AREAS TO BS EN 124:1994. ALL COVERS TO BE DUCTILE IRON.
9. RWP LOCATIONS AND SETTING OUT TO BE PROVIDED BY ARCHITECTS. SVP LOCATIONS AND SETTING OUT TO BE PROVIDED BY MECHANICAL ENGINEER. CURRENTLY THEY ARE ONLY INDICATIVE.
10. DRAINAGE SYSTEM TO BE SUBJECT TO INSPECTION INTERIM AND FINAL TESTS IN ACCORDANCE WITH MOJ TECHNICAL SPECIFICATION STD/XX/SPEC/010 ISSUE 6 AND BS EN 75
15. ALL PIPEWORK
 - PVC WITH FLEXIBLE MECHANICAL JOINTS TO BS EN 295-1 AND BS 65 UP TO 600mm DIAMETER
 - OVER 600mm - CONCRETE TO BS EN 1916 AND 1911
 - BELOW CONCRETE FLOOR SLABS - CAST IRON TO BS 437 OR DUCTILE IRON TO BS 598
16. ALL FLOW CONTROL MANHOLES TO BE BUILT AS PER MANUFACTURER DETAILS AND TO INCLUDE SUMP
17. CATCHPITS CHAMBERS (CP) TO BE PROVIDED UPSTREAM OF ATTENUATION TANKS AND OIL SEPARATORS.
18. ROAD DRAINAGE IS NOT SHOWN. TO BE DEVELOPED IN SUBSEQUENT STAGES.
19. PIPE DIAMETERS TO BE CONFIRMED DURING STAGE 3 DESIGN - CURRENTLY SHOWN AS INDICATIVE ONLY.

KEY:

-  - PROPOSED SURFACE WATER SEWER.
-  - PROPOSED CHANNEL DRAINS.
-  - PROPOSED SITE BOUNDARY.
-  - SW INSPECTION CHAMBER.
-  - SW ACCESS CHAMBER (MANHOLE).
-  - EXISTING SURFACE WATER PIPE

Rev	Date	Description
P02	2021.07.08	GATE ADDED
P01	2021.06.18	FIRST ISSUE

Project Status
 RIBA Stage 2


	Project New Prisons Programme
Ministry of Justice, 102 Petty France, London, SW1H 9AJ	

Project Description / Site
 New Prisons Programme
 Garth Wymott 2

Project Address
 Site Adjacent to HMP Garth & HMP Wymott

Building Type
 Boiler House - Site Infrastructure

Drawing Title
 Proposed Surface Water Drainage Strategy - Boiler House

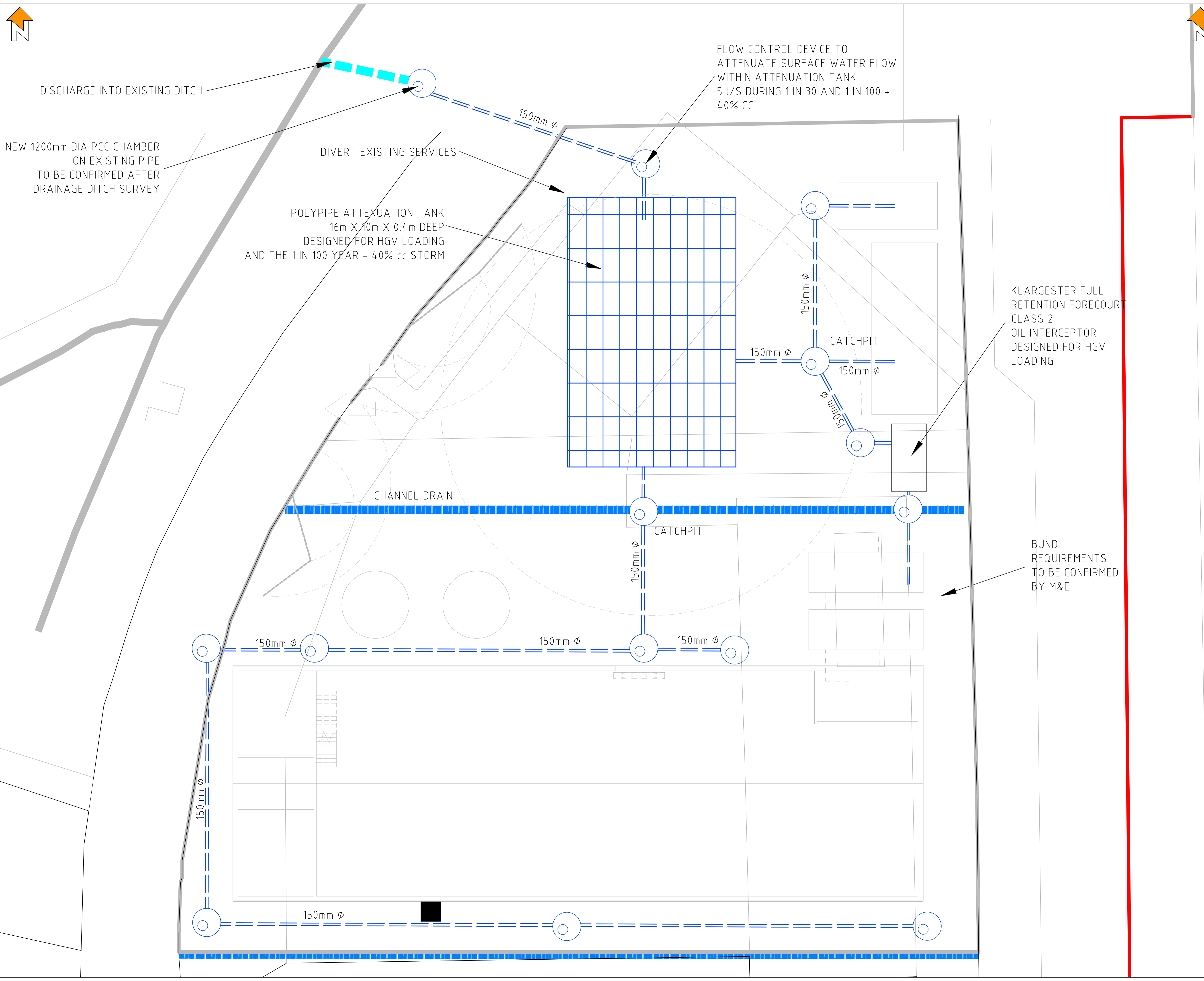
Originator Logo 	Drawn By KJD	Date 18.06.21
	Checked By PCA	Date 18.06.21
	Approved By PCA	Date 18.06.21

Drawing Number
 608623-0000-PEV-GHX0021-ZZ-DR-C-0501

Delref
 D0100

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Data Security Classification OFFICIAL | Suitability S3



NEW 1200mm DIA PCC CHAMBER ON EXISTING PIPE TO BE CONFIRMED AFTER DRAINAGE DITCH SURVEY

DISCHARGE INTO EXISTING DITCH

DIVERT EXISTING SERVICES

POLYPIPE ATTENUATION TANK
 16m X 10m X 0.4m DEEP
 DESIGNED FOR HGV LOADING AND THE 1 IN 100 YEAR + 40% CC STORM

FLOW CONTROL DEVICE TO ATTENUATE SURFACE WATER FLOW WITHIN ATTENUATION TANK
 5 L/S DURING 1 IN 30 AND 1 IN 100 + 40% CC

KLARGESTER FULL RETENTION FORECOUR CLASS 2 OIL INTERCEPTOR DESIGNED FOR HGV LOADING

BUND REQUIREMENTS TO BE CONFIRMED BY M&E

01/2021