

Proposed Foul Water Drainage Strategy Report GHX0011 Site Infrastructure

Garth Wymott 2

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# **Document History**

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P04	04/08/2021	Minor change to references.	PCA	MHA



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# 1.0 Introduction

This Foul 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

# 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 here;

Area I - 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.



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- 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 Main Site area, and a United Utilities foul water pumping station is located within Area I, 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 foul 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 I and Area 3 described in 2.1 above, and the Southern Section occupies Area 2.



In order to combine Area I 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 Foul Water Drainage Strategy

# 3.1 Existing Foul Water Drainage

#### 3.1.1 The Main Site

As the proposed site currently comprises predominantly open fields laid to grass, there is no existing foul water drainage serving the proposed development site. However, analysis of the United Utilities records shows the presence of an existing public foul water pumping station located off Pump House Lane. The rising main from this pumping station runs north, following the route of Pump House Lane, and discharges to the public gravity sewer network around 1.5km away, at the junction of School Lane and Slater Lane in the Moss Side area of Leyland.

In addition, the sewer records show the presence of gravity foul water sewers, which discharge into the pumping station. These sewers run from the adjacent small residential area to the east. Further foul water sewers run from the west, and are understood to serve the existing sites of HMP Garth and HMP Wymott.

A Pre-Development Enquiry was submitted to United Utilities determine the acceptable point of connection for the foul water drainage from the new development. United Utilities have confirmed that the



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existing pumping station does not have sufficient capacity to receive these flows. However, in order to facilitate the proposed development, the pumping station is to be relocated. Whilst being relocated, the capacity of the pumping station will be increased such that it will be sufficient to receive flows from the new development. This proposal has been discussed with United Utilities and accepted in principle. Please refer to the proposed foul water drainage plan for the proposed new location.

The existing rising main from the United Utilities pumping station runs within Pump House Lane, which itself is being realigned to deliver numerous benefits to the proposed development. The location of the new pumping station has been selected to integrate into the realignment of Pump House Lane, and facilitate connection back into the retained section of rising main (Note – it may be that the entire length of the existing rising main requires upsizing in conjunction with the proposed pumping station works – this will confirmed following further discussion with United Utilities).

## 3.1.2 The Bowls Club

The proposed site for the re-located bowls club comprises open fields laid to grass, and therefore there is no existing foul water drainage serving the proposed development site. The nearest existing (private) foul water drainage is located approximately 500m to the north, and serves the existing HMP Wymott site.

#### 3.1.3 The Boiler House

Analysis of the available information for this area indicates that any foul water drainage serving the Boiler House discharges to the existing foul water sewer that runs west to east, immediately south of the Boiler House. This sewer continues to run east and discharges into the United Utilities pumping station, detailed above.

All existing Boiler House drainage will be abandoned, and either removed or fully grouted up and sealed, as part of the development works.

# 3.2 Proposed Foul Water Drainage

## 3.2.1 The Main Site

The Southern Section is not expected to generate any foul water flows, as no occupied buildings will be provided in this area. Foul flows from the Northern Section will be collected via a series of private inspection chambers, manholes and drains. The private main drainage will generally run in an easterly direction, before discharging into the relocated and upsized United Utilities pumping station.

Discussions with United Utilities are ongoing regarding the proposed works to relocate the pumping station. Initial indications are that the project will incur all costs associated with the relocation and upsizing. Further details will be provided when available, and as discussions progress with United Utilities.



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#### 3.2.2 The Bowls Club

Foul flows generated by the re-located Bowls Club will be discharged to a new below ground private drainage network. Due to the remote location of the site, and the lack of nearby foul water sewers/drains, it will be necessary to provide a new pumping station to discharge the foul flows. The rising main from the new pumping station is proposed to discharge into the existing foul water drainage network serving the existing HMP Wymott site, and from there to the re-located United Utilities pumping station.

The surface water drainage from a small area of car park will also be discharged into the new pumping station – this is required to supplement the foul flows from the building, and will mitigate the risk of septicity in the pumping station (caused by sewage being held in the pump station for an extended period between pump activations).

#### 3.2.3 The Boiler House

Foul water flows generated by the Boiler House will be discharged to a new below ground gravity sewer network, which in turn will discharge to an existing adjacent foul water sewer. The flows from the Boiler House are expected to be minimal.

Foul water flows generated from the relocated portacabin office facility are to discharge to a new package pumping station, The pumping station will discharge via a new rising main, to the existing foul water drainage network serving the existing prisons. This approach is required due to the distance between the proposed portacabin location and the existing site foul water drainage network.

# 4.0 Conclusions

An outline foul water drainage strategy drawing has been prepared for the Main Site, Bowls Club and Boiler House. Further details will be provided in a future reserved matters application.



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# Appendix A

# **Main Site:**

608623-0000-PEV-GHX0011-ZZ-DR-C-0561-Proposed Foul Water Drainage Strategy

# **Bowls Club:**

608623-0000-PEV-GHX0031-ZZ-DR-C-0550-Proposed Foul Water Drainage Strategy

# **Boiler House:**

608623-0000-PEV-GHX0021-ZZ-DR-C-0550\_Proposed Foul Water Drainage Strategy-Boiler House 608623-0000-PEV-GHX0021-ZZ-DR-C-0550\_Proposed Foul Water Drainage Strategy-Relocated Car Park









