TECHNICAL NOTE

WATER | ENVIRONMENT

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PROJECT	MFG Morrisons Pinchbeck Pinchbeck, Lincolnshire	CLIENT	MBH Design Studio LTD	
TITLE	Flood Risk Assessment	REFERENCE	24061-FRA-TN-01	P01

AUTHOR	CHECKER	APPROVER
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REV	COMMENTS	DATE	AUTH	CHKR	APPR
P01	First draft issue	03/09/2024	EB	DM	TC

1 Introduction

1.1 Water Environment was commissioned by MBH Design Studio Limited to produce a flood risk assessment (FRA) for the proposed development at Morrisons Petrol Station, Wardentree Lane, Pinchbeck, PE11 3UG. The site is located within the jurisdiction of Lincolnshire County Council (LCC) and South Holland District Council (SHDC), with the role of Lead Local Flood Authority (LLFA) fulfilled by LCC.

1.2 The GOV.UK Flood Map for Planning[1] shows the site to lie within Flood Zone 3 and therefore a Flood Risk Assessment (FRA) is required to support a planning application at the site.

1.3 This document has been prepared with due consideration of the National Planning Policy Framework[2] (NPPF), the latest Planning Practice Guidance for Flood Risk and Coastal change[3] (PPG) and the Environment Agency's FRA guidance. In addition, this FRA will address local requirements for planning, including South East Lincolnshire Local Plan Policy 4: Approach to Flood Risk.

1.4 The proposed development is deemed to be a 'minor' development, as defined in the PPG, and should therefore follow the EA Advice for minor extensions.

2 Site context and proposed development

2.1 The site is known locally as the Morrisons Petrol Station. The site is bounded by Wardentree Lane to the North, Benner Road to the east and commercial developments to the south and west.

[1] Available at: https://flood-map-for-planning.service.gov.uk [Accessed: 28/05/2024]
[2] Ministry of Housing, Communities and Local Government, Updated National Planning Policy Framework, December 2023
[3] Ministry of Housing, Communities and Local Government. Planning Practice Guidance: Flood risk and coastal change, Updated August 2022

2.2 The closest watercourses are Vernatts drain and the River Welland, respectively located approximately 415 m and 770 m to the south east of the site and Blue Gowt drain located approximately 3.6 km north of the site.

2.3 The exact location of the site in relation to the surrounding area is shown in Figure 1

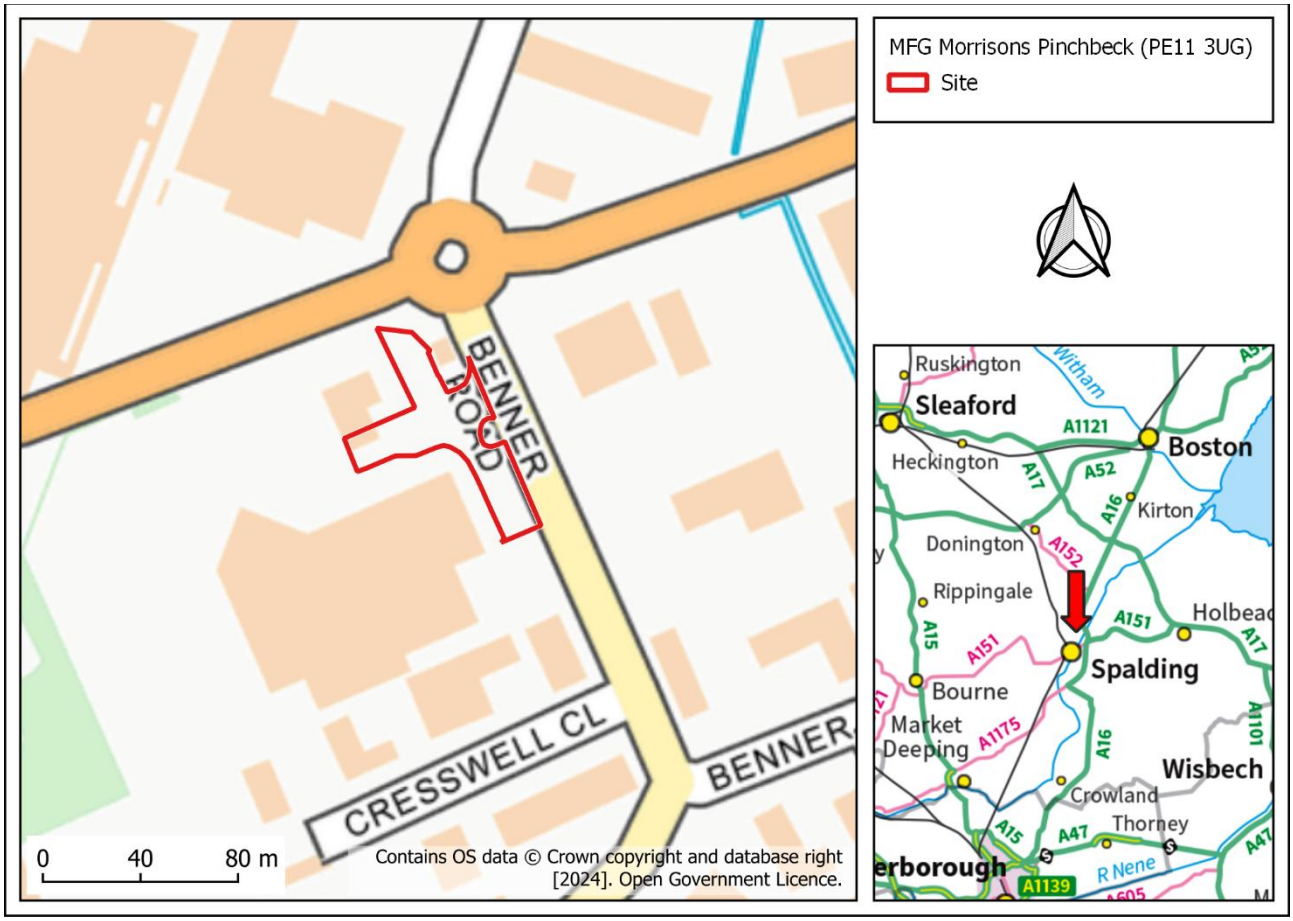


Figure 1: Site location

2.4 The existing site is used as a petrol station with a sales building, car wash, jet wash and customer car parking.

2.5 The proposals include an extension of the existing sales building of 79 m^2, and the installation of six new electric vehicle charging bays, with an associated electrical sub-substation and LV panel enclosures. The existing access route to the site, via Banner Road, is to be maintained post development.

2.6 The existing and proposed development drawings are included in the appendix of this technical note.

2.7 The existing use of the site is considered to be 'less vulnerable' in accordance with NPPF Annex 3. There will be no change to the sites vulnerability to flood risk as a result of the proposed development, and the provision of the proposed infrastructure will not result in a measurable increase in the number of people potentially at risk of flooding at the site. Therefore, the assessment of flood risk is limited to consideration of the potential risk directly in relation to the proposed infrastructure.

2.8 A topographic survey of the site was not available, therefore, the latest LiDAR data has been used to determine the ground levels around the site. The 1m LiDAR DTM survey for the site and surrounding area is illustrated in Figure 2. Ground levels are shown to range from 2.65 m Above Ordnance Datum (m AOD) in the south of the site, to 3.50 m AOD, in the north east and north west of the site. Ground levels are between 2.75 m AOD and 3.25 m AOD at the location of the proposed charging bays and

associated infrastructure, and between 3.17 m AOD and 3.26 m AOD at the location of the proposed extension to the sales building.

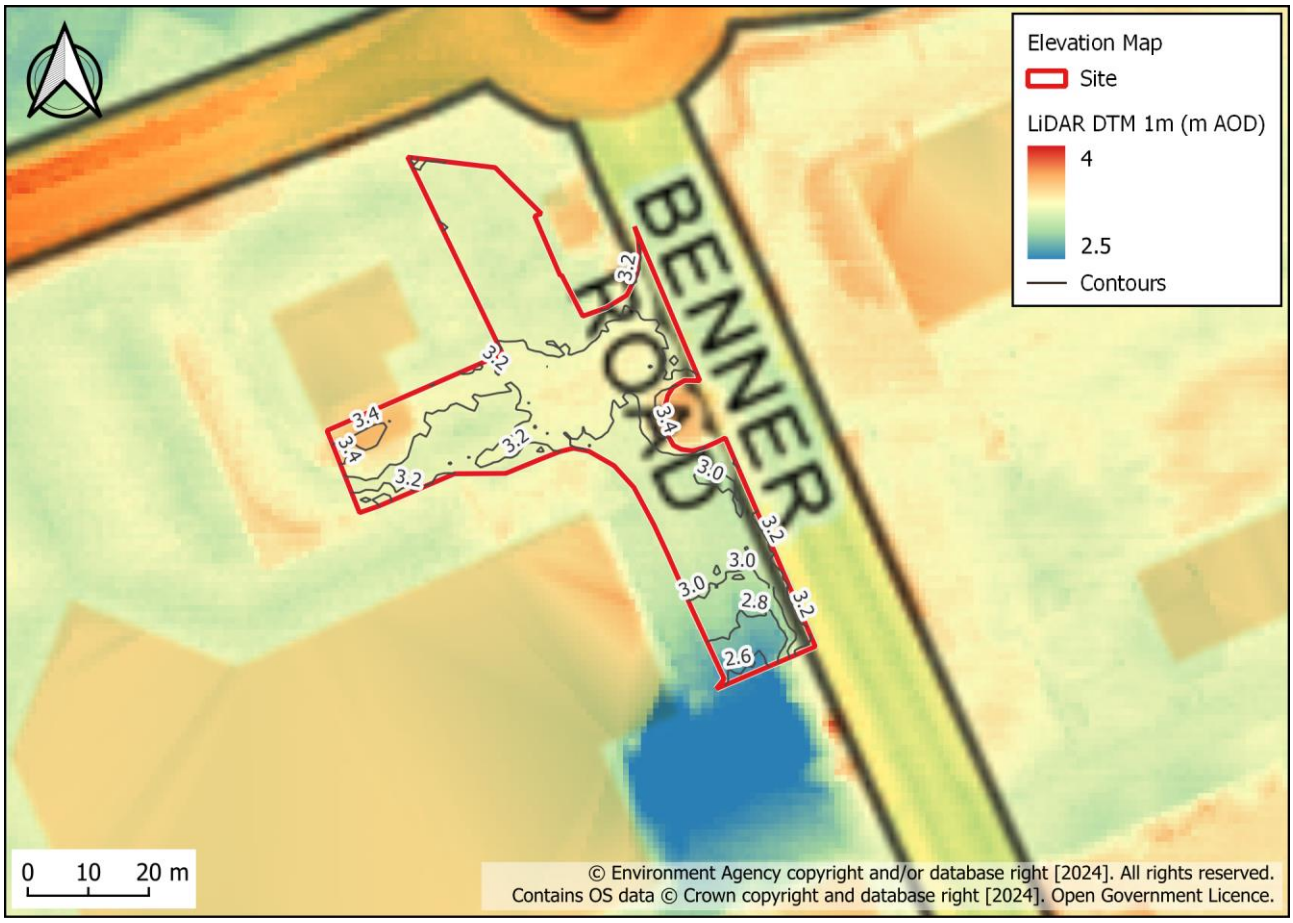


Figure 2: LiDAR DTM (1m) Elevation Map

3 Assessment of Flood Risk

3.1 In assessing the risk of flooding to the site, the South East Lincolnshire Strategic Flood Risk Assessment[4] (SFRA) and the LCC Preliminary Flood Risk Assessment (PFRA)[5] have been reviewed, along with the latest EA flood risk mapping.

History of flooding

3.2 The EA Historic Flood Map shows the site to lie outside of any historic flood extents in the area of Pinchbeck, with the nearest previously recorded floodplains located approximately 4 km upstream and 5 km downstream of the site.

3.3 The LCC PFRA summarises past floods across the county and notes frequent fluvial and surface water flood events. Most notably, flooding in June and July 2007 is reported to have affected South Holland District, however, the site is not recorded to have flooded during this event.

3.4 The LCC records were reviewed for Section 19 Flood Investigation Reports. Multiple flood events area recorded in the area of Pinchbeck, predominantly caused by surface water flooding and the limited

[4] South East Lincolnshire Strategic Flood Risk Assessment, March 2017
[5] Lincolnshire County Council, Preliminary Flood Risk Assessment, June 2011

capacity of ordinary water courses during heavy rainfall events. However, no reports relating directly to the site or surrounding were identified.

3.5 No further historic flood records at the site or surrounding area have been identified.

Risk of flooding from the rivers and sea

3.6 The published GOV.UK Flood Map for Planning, illustrated in Figure 3, shows that the site is located entirely within Flood Zone 3. At this location, Flood Zone 3 is defined as land having a greater 1% AEP of fluvial flooding, or 0.5% AEP of tidal flooding. Therefore, the flood zone classification identifies that the site may be at risk from tidal or fluvial flooding.

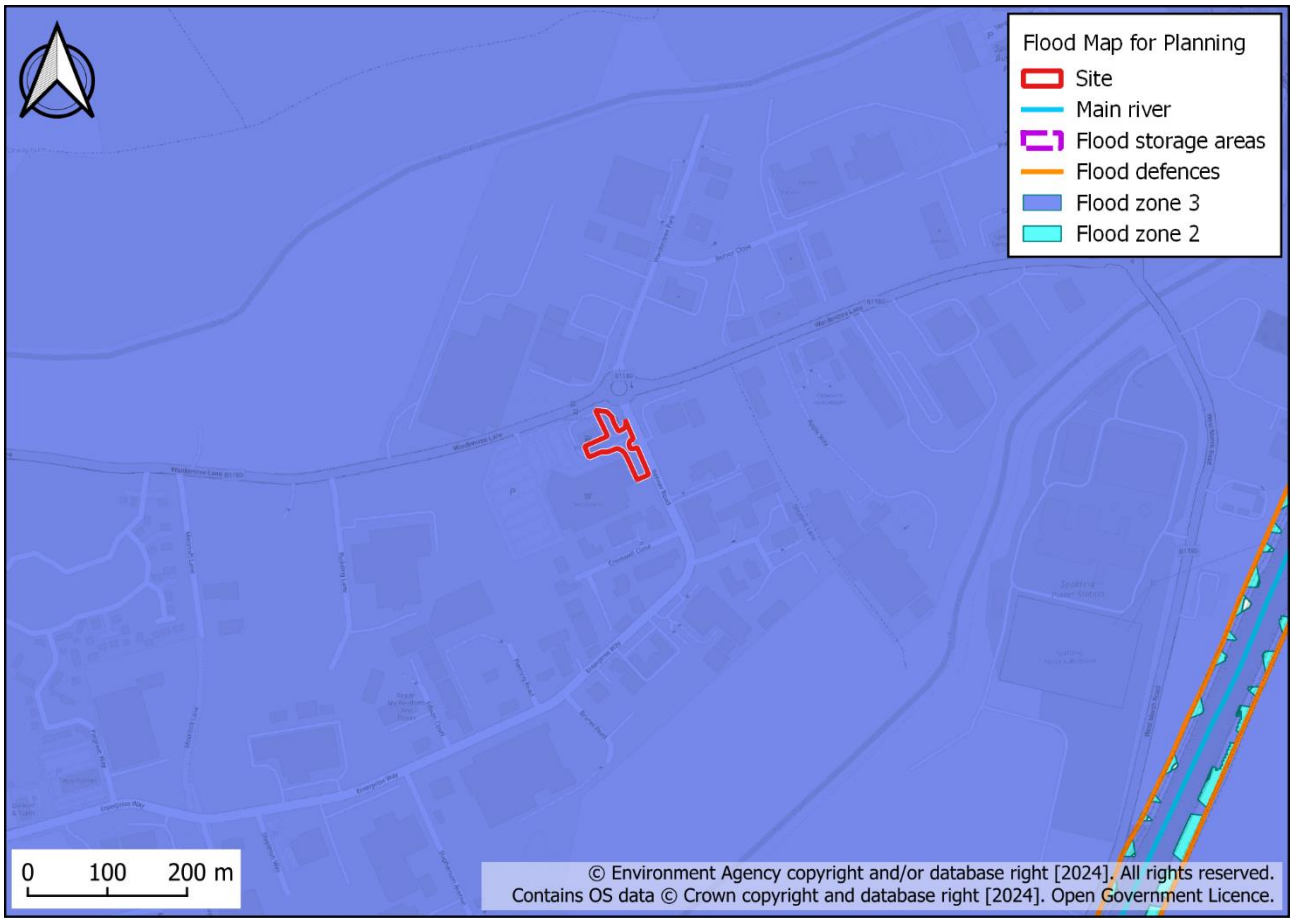


Figure 3: Flood Map for Planning

3.7 The flood zone extents shown in the Flood Map for Planning presented in Figure 3 do not take into account any existing flood defences or any other flood alleviation measures.

3.8 Figure 3 shows flood defences are present along the bank of the River Welland to the south east of the site. The River Welland Catchment Flood Management Plan notes that along the River Welland embankments, including through Pinchbeck, have been designed to the 1% AEP standard.

3.9 The site also lies within the Pinchbeck Marsh pumped catchment under the Internal Drainage Board (IDB) for Welland and Deepings, who are responsible for flood defence in the area. A map showing the location of the nearest pumping stations and water flow routes provided by the Welland IDB is included in the appendix in of this technical note. Email correspondence with the Welland and Deepings IDB confirmed that a number of electric pumps operate within the catchment which direct water into the Blue Gowt outfall drain and subsequently water is evacuated at low tide into the tidal River Welland, downstream of the site.

3.10 The site is located within the tidal influence of the River Welland, located approximately 1 km downstream of the tidal limit of the at Fulney Lock. The EA have provided the Tidal Nene and Tidal Welland hydraulic modelling report. However, the site is not covered by this modelling with the closest model outputs to the site approximately 7.5 km north east (downstream) of the site.

3.11 The EA were contacted regarding flood risk information in the area, and the email response is attached in the appendix of this technical note. The EA confirmed that the site is within Flood Zones 3 and 2 of the Flood Map for Planning because it does not take into account any flood defences or the operation of the pumping stations, stating that the Flood Map for Planning utilises the Fenland 2008-2009 model. The model determine the risk to the catchment if a rainfall event was to occur and the IDBs were not carrying out any pumping, which is not realistic as it does not represent the actual maintained catchment condition.

3.12 As confirmed by the EA, the actual risk of tidal and fluvial flooding to the site is considered low due to the presence of flood defences and operation of IDB pumping stations in the vicinity of the site not included in the Flood Map for Planning.

3.13 There may be a residual risk of flooding in the event of the pumping stations failing. However, the EA have confirmed that this is unrealistic.

3.14 The actual risk of tidal and fluvial flooding to the site is therefore considered to be low.

Risk of flooding from surface water

3.15 Flooding from surface water can occur following intense local rainfall events when flood water is unable to infiltrate into the ground or discharge into natural or artificial drainage infrastructure. In an urban environment, the risk of flooding from surface water and overloaded sewers is closely related, and both are included in relevant surface water datasets. Flood water subsequently follows the topography of the local area. Surface water flooding events are typically of a short duration but can be severe.

3.16 The GOV.UK long term flood risk mapping includes the risk of surface water flooding. These maps are a useful tool in assessing the extent and frequency of flooding in a general area but do come with a caveat that they should not be used at property level. In this area, the maps are considered to be suitable at the 'county to town scale'. Therefore, engineering judgement is required when using these maps for this purpose.

3.17 Figure 4 illustrates the GOV.UK surface water flooding extent map. The dark blue shaded areas show locations of high surface water flood risk, which have a greater than 3.3% (1 in 30) annual probability of flooding, lighter blue areas show medium risk of between 3.3% and 1% (1 in 100) annual probability of flooding and the pale blue areas indicate low risk regions of between 1% and 0.1% (1 in 1000) annual probability of flooding. Areas that are not highlighted in blue are classed as having a very low risk of surface water flooding, with a less than 0.1% AEP of flooding.

3.18 The design event is the 1% AEP plus climate change event. It is important to note that surface water maps do not include future climate change, therefore it is common practice to evaluate the 1% AEP event as well as the 0.1% AEP event as a sensitivity test for what might happen in the future over the lifetime of the development.

3.19 The 0.1% AEP event is illustrated in the 'low probability' surface water flood map presented in Figure 5.

3.20 The percentage increase between the 0.1% AEP and 1% AEP rainfall events is typically significantly greater than the percentage climate change allowance to be required applied to the 1% AEP rainfall. As such the 0.1% AEP event model results would exceed the 1% AEP plus climate change results if modelled. It is therefore reasonable to use the extreme event (0.1% AEP) as an indication of flooding for the event greater than the 1% AEP plus climate change event, however it should not be used as a direct substitute for the 1% AEP plus climate change event itself.

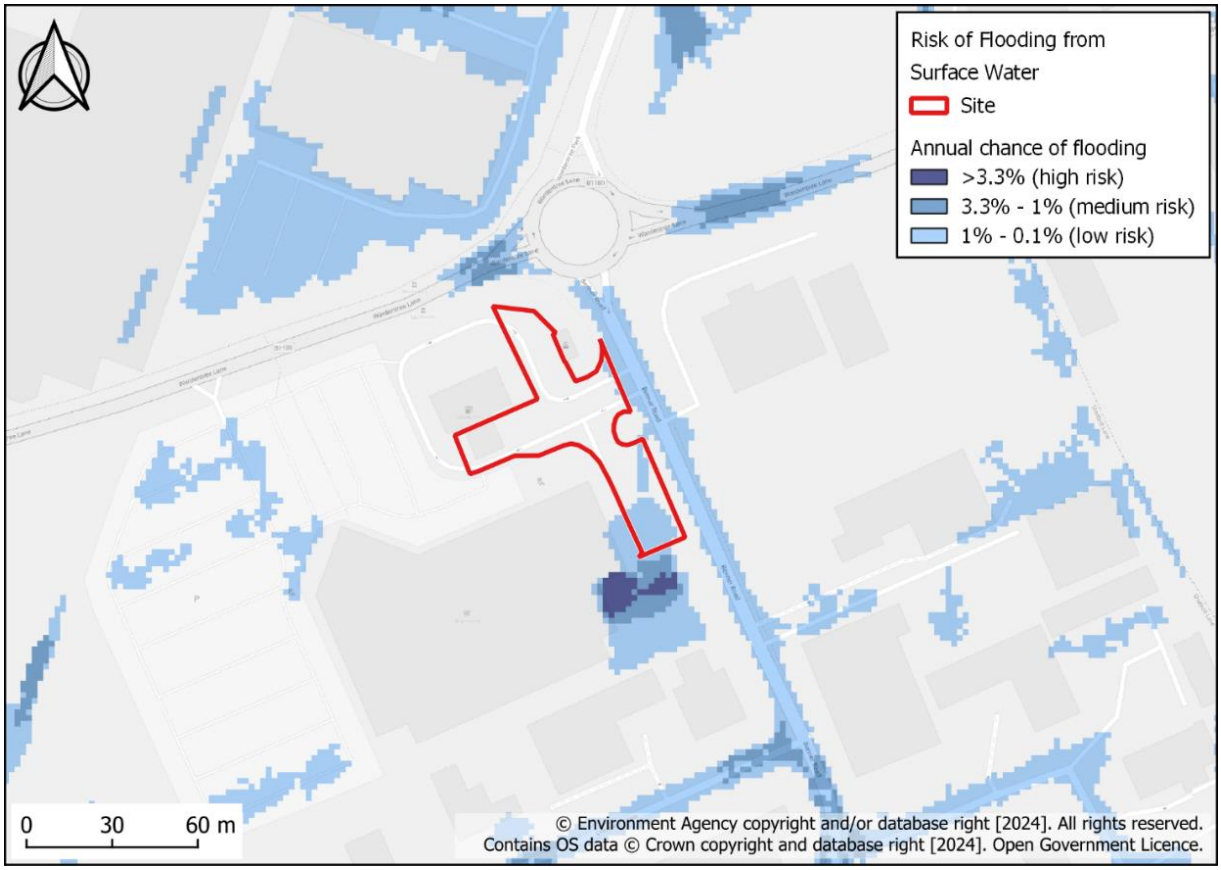


Figure 4: Risk of flooding from surface water – extent

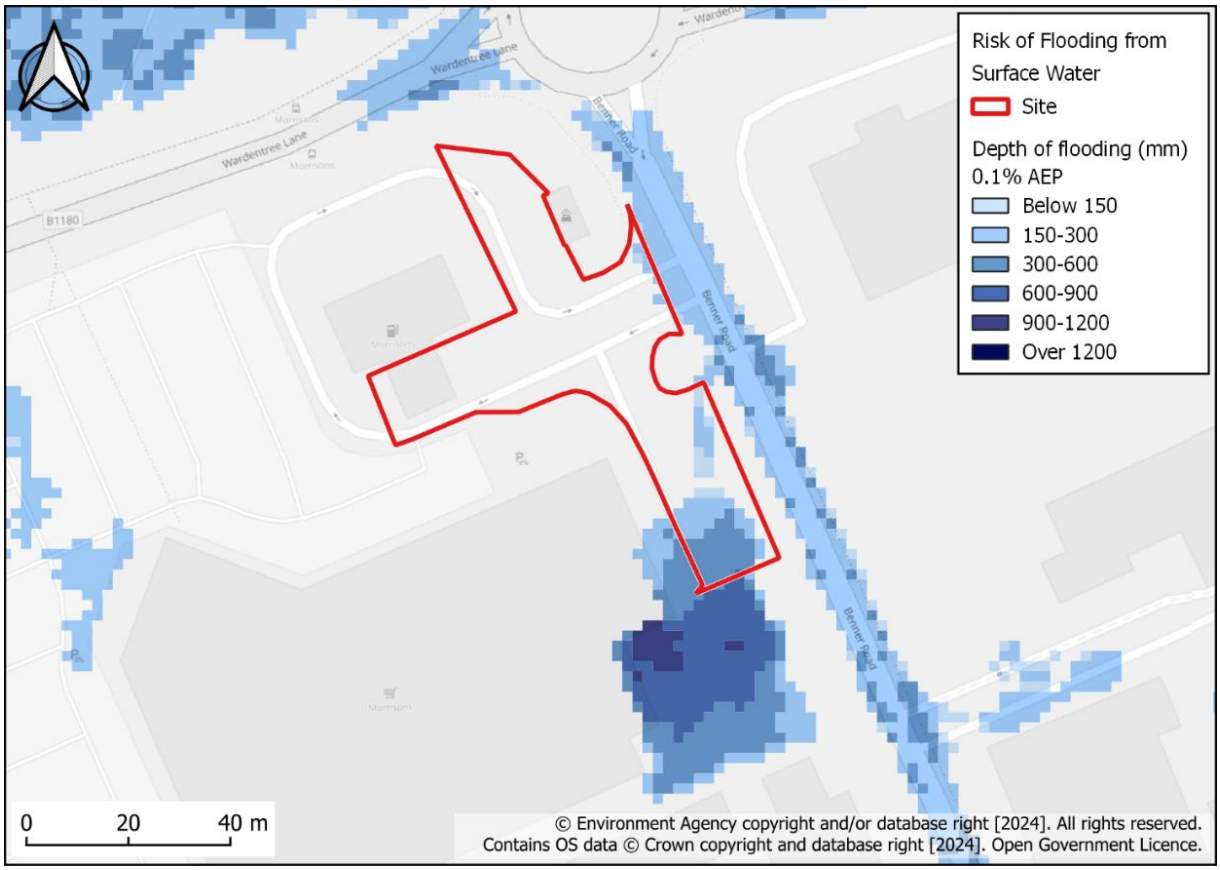


Figure 5: Risk of flooding from surface water - low probability (0.1% AEP) event

3.21 Figure 4 shows the majority of the site is at a 'very low' (less than 0.1% AEP) risk. However, the eastern edge and southern corner of the site are shown to be at 'low' (0.1% to 1% AEP) risk of surface water flooding.

3.22 The surface water flooding to the south of the site is disconnected from the flooding in the adjacent road and therefore ponding in the area of lower lying hardstanding area, as shown in Figure 2. Comparing the modelled 0.1% AEP flood extents against LiDAR suggests a 0.1% AEP flood water level of up to 3.15 m AOD.

3.23 The site is not shown at risk of surface water flooding during the 1% AEP, however some shallow flooding may occur at the southern end of the site in the 1% AEP plus climate change event.

Risk of flooding from sewers

3.24 Sewer flooding generally results in localised short-term flooding caused by intense rainfall events overloading the capacity of sewers. Flooding from sewers and highways is linked to the risk of flooding from surface water in urban areas, with the exact source of flooding often indistinguishable.

3.25 The Anglian Water Asset Map, included in the appendix of this technical note, shows a foul and surface water sewer which run in a northwest direction along Benner Road to the east site, outside the site boundary.

3.26 Sewer flooding is likely to be closely tied to surface water flooding and any surcharging of the local drainage system emerging at ground level would follow the topography of the local area.

3.27 It is expected that there will be no significant changes to the existing on-site drainage system as a result of the proposed development; and therefore, it is considered that the risk to the development from sewer flooding independent of other sources is low.

Risk of flooding from groundwater

3.28 Groundwater flooding occurs as a result of water rising from an underlying aquifer or flowing from springs. This typically occurs following prolonged periods of intense rainfall, and the areas at greatest risk are usually low-lying where the water table is likely at a shallow depth.

3.29 Groundwater flooding can interact with other flooding sources, further exacerbating their risk by reducing the infiltration of flood water to the ground. The main mechanisms for elevated groundwater are associated with periods of heavy rainfall in permeable superficial deposits and / or hydraulic continuity of river baseflow and high river water levels within permeable deposits.

3.30 An online 1:50k British Geology Society (BGS) map[6], shown in Figure 6, indicates that the bedrock geology at the site location consists of Oxford Clay formation (mudstone). The BGS map details that the site is underlain by Tidal flat (clay and silt) superficial deposits.

[6] Available at: https://mapapps.bgs.ac.uk/geologyofbritain/home.html [Accessed: 29/05/2024]

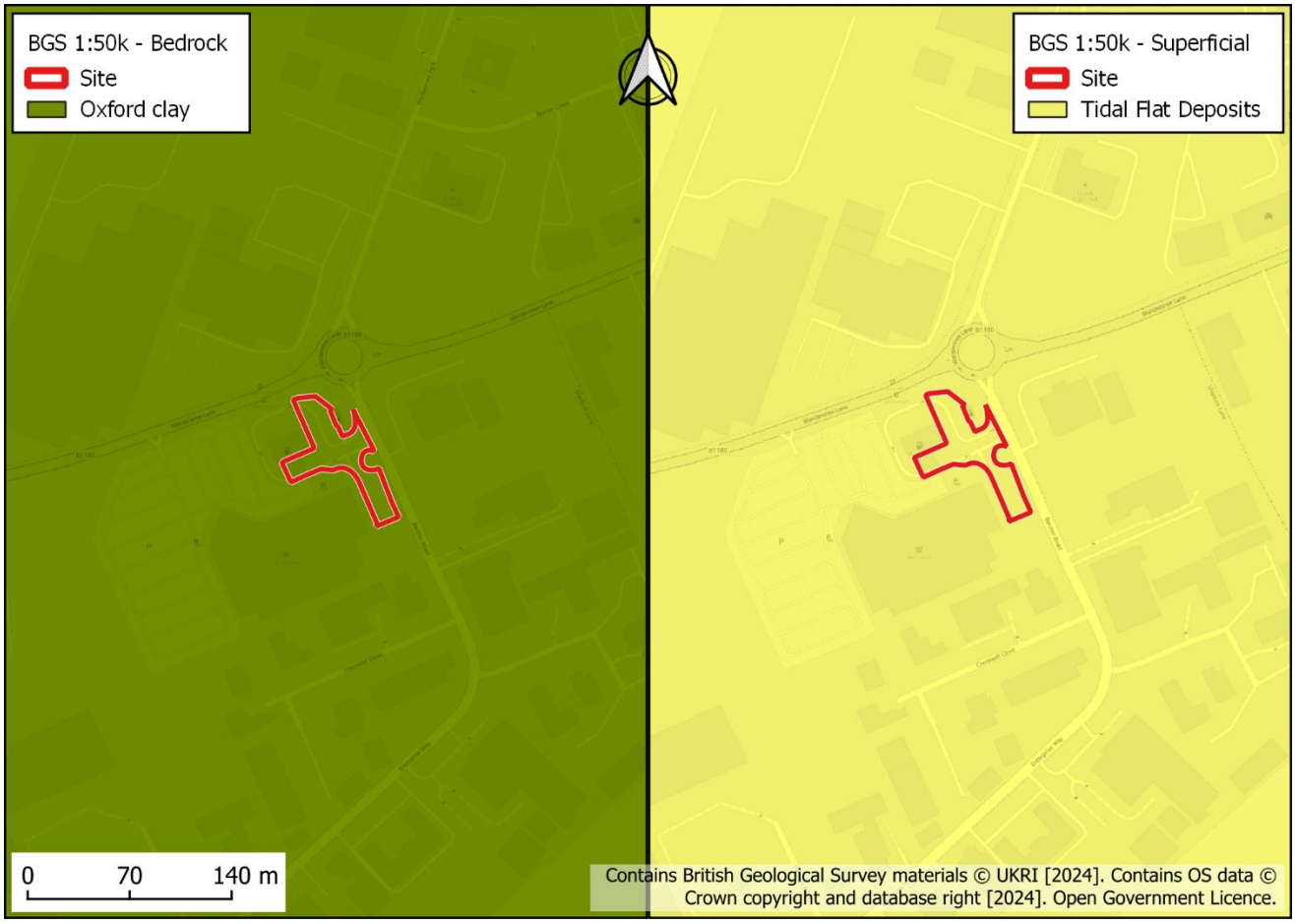


Figure 6: BGS - 1:50k geology

3.31 The DEFRA Magic Maps[7] show that the bedrock is classified as an unproductive aquifer. Which is defined as *'rock layers with low permeability that have negligible significance for water supply or river base flow'*. The superficial deposits are also classified as an unproductive aquifer.

3.32 There is no onsite ground investigation available. Therefore, publicly available BGS borehole records have been used to verify local ground conditions. The nearest BGS borehole record (TF22SE92) which is located in the south east corner of the site, within the site boundary. The borehole was excavated to a depth of 20 m and the log shows the geology to be made up of clay and silty sand. Water was encountered at 2.05 m.

3.33 The site and surrounding area are predominantly hard paved, which reduces the risk of groundwater emergence at the surface. Any groundwater emergence would follow localised flow paths such as those shown in the surface water flooding maps, therefore, any flooding experienced would be similar to that shown on the surface water risk mapping.

3.34 There are no below ground elements to the proposal, therefore the proposed development is considered to be at low risk of groundwater flooding.

Risk of flooding artificial waterbodies

3.35 The risk of flooding from artificial sources has been defined as the risk arising from failure of man-made infrastructure or human intervention that causes flooding. This includes failure of canals or reservoir embankments, as well as activities such as groundwater.

[7] Available at: https://magic.defra.gov.uk/MagicMap.aspx [Accessed: 29/05/2024]

3.36 The GOV.UK 'Risk of Flooding from Reservoirs' online map, presented in Figure 7, shows that the site does not lie within the modelled extents of reservoir flooding.

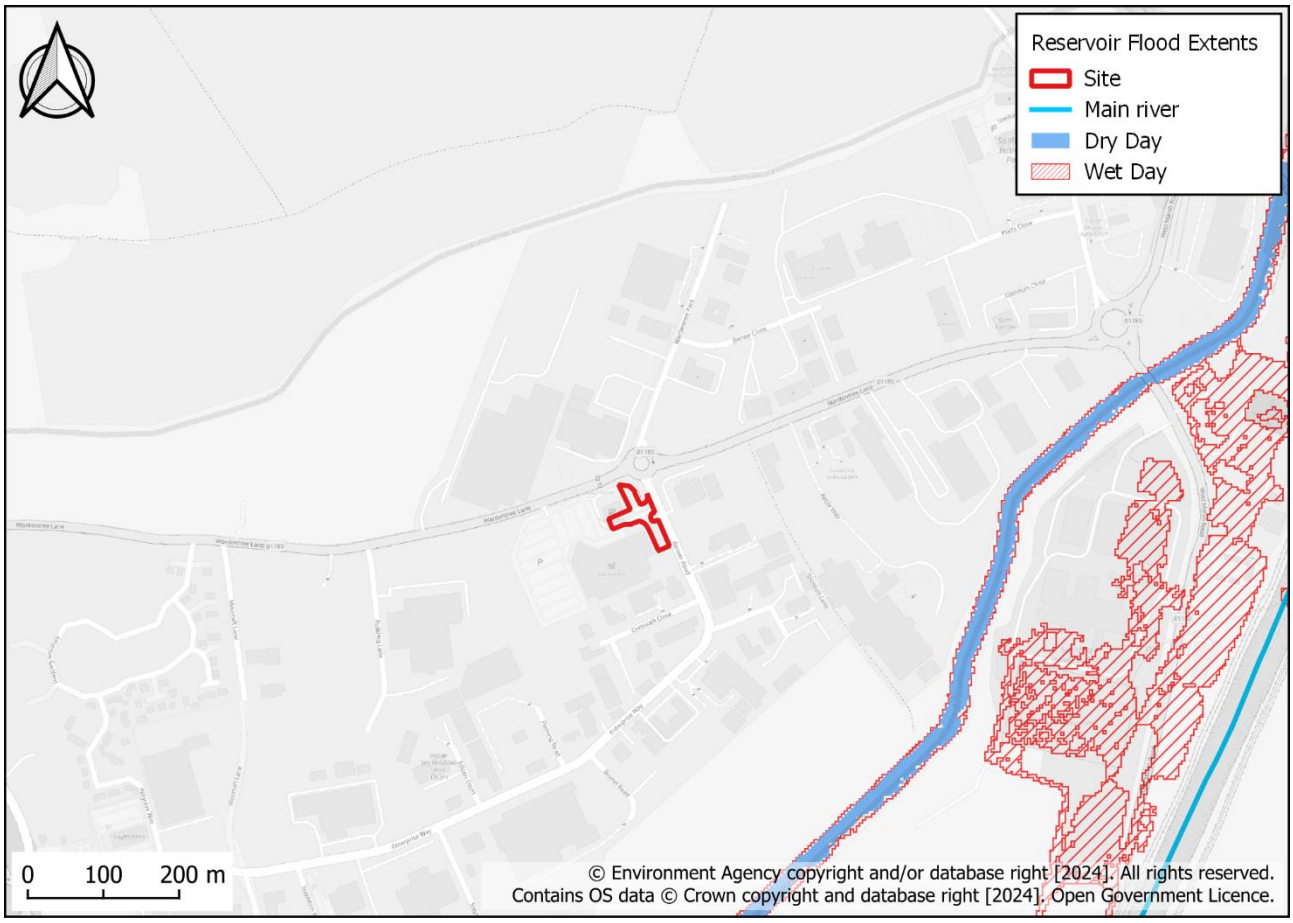


Figure 7: Risk of flooding from reservoirs

3.37 The site is therefore not considered at risk of reservoir flooding and there are no further artificial waterbodies in the area that would constitute significant risk of flooding to the site.

4 Development Response to Flood Risk

4.1 The assessment of flood risk identified that the only flood risk to the site and proposed development is from surface water flooding.

4.2 If the 0.1% AEP event map is used as an upper limit for potential flood depths, then the worst case flood water level was estimated at 3.15 m AOD.

- For the proposed EV charging bays LIDAR ground levels are at approximately 3.05 m AOD, equating to a maximum flood depth of 0.1 m.
- For the proposed GRP enclosures for associated infrastructure LIDAR ground levels vary between 2.75 m AOD to 2.85 m AOD, equating to a maximum flood depth of between 0.30 m and 0.40m.

4.3 The proposed charging bays are reliant on existing ground levels, however, the installation of the charger itself is typically installed on a concrete footing/plinth. It is recommended that such concrete plinth should be 100 mm in height.

4.4 It is recommended that the substation and LV panel are raised above the surrounding ground level. The development layout shows that the LV panel and substation are proposed to be elevated by a kerb, and

that they are to be additionally constructed on a concrete plinth/footing. The combined height of the kerb and footing is not indicated in the drawing, but may not be to the same height as the estimated depth of flooding.

4.5 Any internal electrical infrastructure should be located above 3.15 m AOD, to minimise the risk of flooding. If not, then the infrastructure should include waterproofing where possible to minimise damage and increase recoverability.

4.6 Due to the non residential nature of the proposed development and associated low risk to life, it is considered unnecessary for the development to be fully flood resistant. Furthermore, the proposed development will result in no increase in the number of people potentially at risk of flooding at the site.

4.7 A flood management plan should be put in place so that electrical supply can be shut down to protect infrastructure and site evacuated as required in the event of surface water flooding. Following the event, prior to being put back into operation, the infrastructure should be inspected.

4.8 It is also recommended that site operators are aware of any MET office weather warnings related to high intensity rainfall, as this can be a precursor for surface water flooding.

4.9 No flood risk design response is required for the proposed extension to the sales building, as it is not shown to be at risk of flooding.

5 Surface Water Drainage

5.1 The petrol filling station site is fully developed and currently drained by and existing surface water drainage system.

5.2 The proposed development will not change the drainage of the site, rather the area of existing tarmac surfacing will be replaced by the roof of the sales building extension. The location of the charging bays and associated infrastructure is on existing parking bays, therefore there will be no reduction in permeable surfacing or increase in drained hardstanding runoff areas.

5.3 Drained surface water runoff from the site will therefore remain unchanged and as such no further consideration is considered required.

6 Conclusions and recommendations

6.1 This technical note has assessed the risk of flooding from all sources.

6.2 The site lies within Flood Zone 3, however, the EA confirmed that the actual risk of tidal and fluvial flooding to the site is low due to the presence of flood defences and the operation of IDB pumping stations.

6.3 The site may be at residual risk of flooding in the event of the IDB pumping stations not operating. However, the EA have confirmed is very unrealistic and therefore, the residual risk is considered to be low.

6.4 The EA mapping shows that the southern site may be at risk of surface water flooding, where the charging bays and associated infrastructure is proposed.

6.5 In order to limit the risk of flooding to the development, mitigation measures are recommended in the report to minimise damage and increase the speed of recovery after a flood event. This technical note outlines recommendations, however, options to protect the infrastructure from surface water flooding should be considered specifically during detailed design.

6.6 The proposed development does not alter the vulnerability of the site or increase the number of occupants, and therefore with the recommended mitigation measures, there is no increase in flood risk to the site as a result.

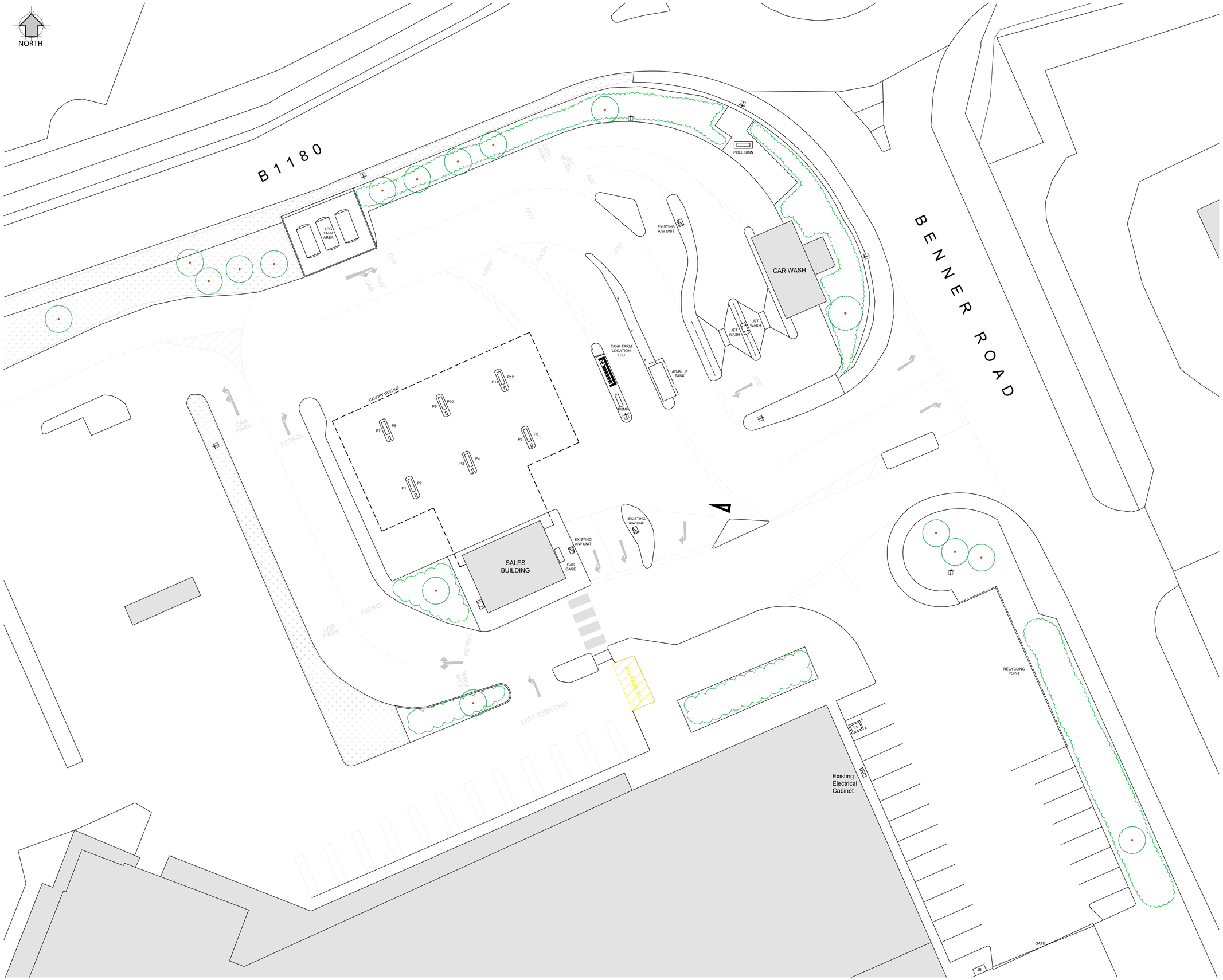
6.7 The site and proposed development are not at risk of flooding from any other source.

6.8 The proposed development changes to the existing petrol station site will not result in an increase in drained runoff surface area and therefore no increase in rainfall runoff from the developed site.

6.9 The information and assessment contained within this Technical Note in relation to flood risk provides sufficient information to demonstrate that whilst the site is at risk of surface water flooding during design event, the proposed infrastructure should not be at significant risk of flooding due to the suggested flood management measures. As such, the development proposals comply with the requirements of LCC and the NPPF.

Appendix

- MBH Design Studio Ltd – 14314-FS2083-200, Pinchbeck Morrisons- Existing site plan
- MBH Design Studio Ltd – 14314-FS2083-201, Pinchbeck Morrisons- Proposed site plan
- Anglian Water Sewer Assets
- EA email response
- IDB pumping stations map



DRAWING NOTES

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GENERAL NOTES

1. This drawing has been prepared for the sole purpose of obtaining planning permission.
2. This drawing is to be read in conjunction with drawings numbered:

14314-FS2083-LP	Location Plan
14314-FS2083-BP	Block Plan
14314-FS2083-200	Existing Site Plan
14314-FS2083-201	Proposed Site Plan
14314-FS2083-202	Existing Sales Building Layout
14314-FS2083-203	Existing Sales Building Elevations
14314-FS2083-204	Proposed Sales Building Layout
14314-FS2083-205	Proposed Sales Building Elevations
14314-FS2083-206	EV Canopy and Charger Details
14314-FS2083-207	Substation Enclosure Details
14314-FS2083-208	LV Enclosure Details
14314-FS2083-209	Meter Cabinet Details
14314-FS2083-210	Jet Wash Plan and Elevations
14314-FS2083-211	Air/Water and Vac Details

3. Any advertisements are indicative and are subject to a separate advertisement application
4. Any neighbouring buildings shown on the elevations are diagrammatic and have been extrapolated from site photographs. They have not been measured.

SCHEDULE OF EXISTING FINISHES

BUILDING EXTERNAL WALLS
Fairfaced Brickwork external wall finish.

BUILDING ROOF
Flat roof.

SHOPFRONT
White aluminum framed glazing with automatic door

CANOPY
Traditional steel framed canopy over forecourt w/o signage fascia.

SURFACING
Mixture of concrete and Asphalt, with various drainage channels / gullies.

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SCALE - METRES - 1:200 @ A1

REV	DATE	DESCRIPTION	DRAWN/CHECKED
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REVISION NOTES			

PLANNING

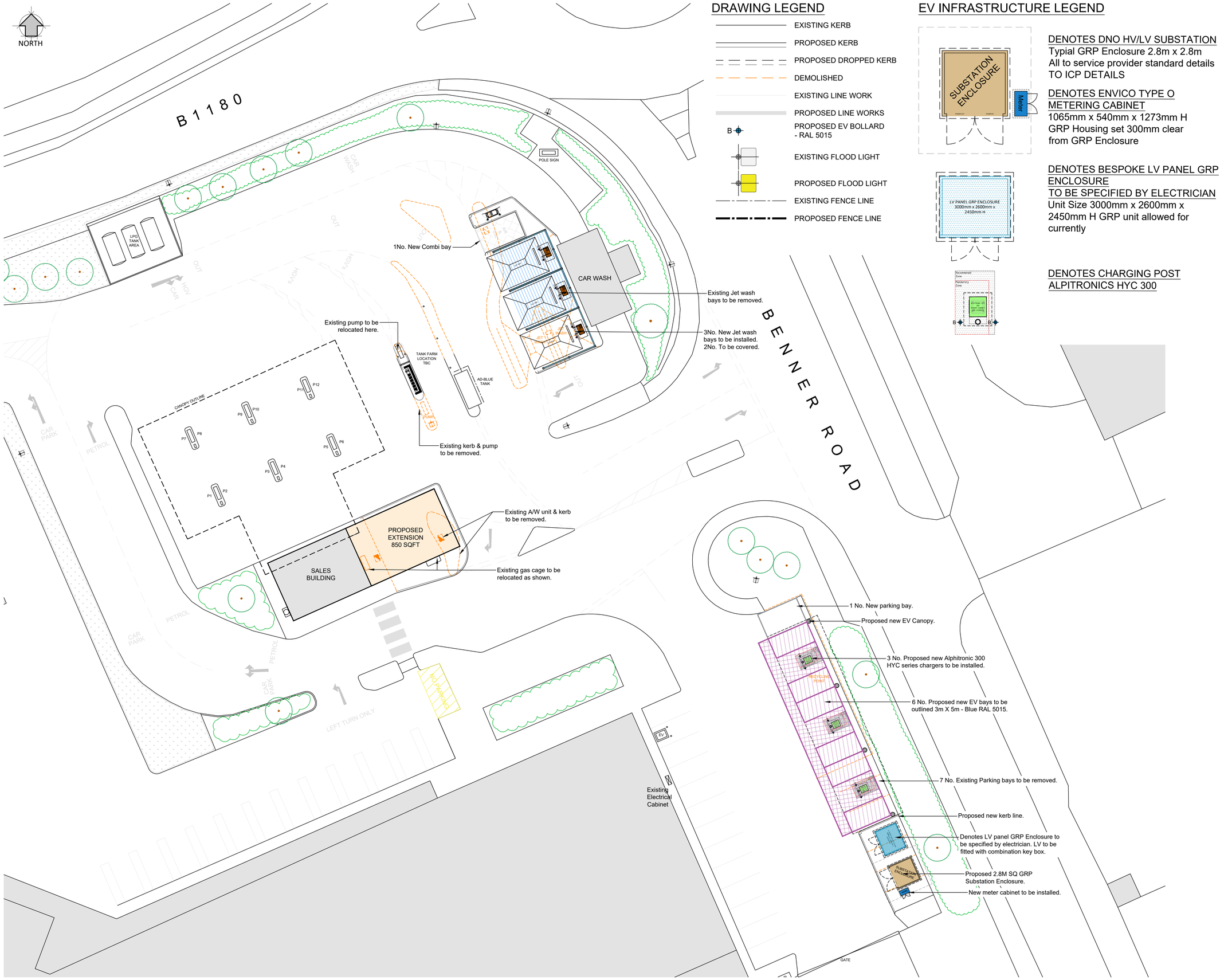
mbh
MBH Design Studio Ltd.
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www.mbhltd.com t: 01932 352 727 f: 01932 351 545

CLIENT
mfg motor fuel group

PROJECT
FS2083 - PINCH BECK MORRISONS
WARDENTREE ROAD
SPALDING
PE11 3UU

DRAWING TITLE
EXISTING SITE PLAN

DRAWN BY	DATE	SCALE	PAPER SIZE
DT	28.05.2024	1:200	A1
CHECKED BY	DRAWING NUMBER		REV.
JN	14314-FS2083-200		-



DRAWING LEGEND

- EXISTING KERB
- PROPOSED KERB
- PROPOSED DROPPED KERB
- DEMOLISHED
- EXISTING LINE WORK
- PROPOSED LINE WORKS
- PROPOSED EV BOLLARD - RAL 5015
- EXISTING FLOOD LIGHT
- PROPOSED FLOOD LIGHT
- EXISTING FENCE LINE
- PROPOSED FENCE LINE

EV INFRASTRUCTURE LEGEND

DENOTES DNO HV/LV SUBSTATION
Typial GRP Enclosure 2.8m x 2.8m
All to service provider standard details
TO ICP DETAILS

DENOTES ENVICO TYPE O METERING CABINET
1065mm x 540mm x 1273mm H
GRP Housing set 300mm clear from GRP Enclosure

DENOTES BESPOKE LV PANEL GRP ENCLOSURE
TO BE SPECIFIED BY ELECTRICIAN
Unit Size 3000mm x 2600mm x 2450mm H GRP unit allowed for currently

DENOTES CHARGING POST
ALPITRONICS HYC 300

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SCHEDULE OF PROPOSED FINISHES

BUILDING EXTERNAL WALLS
Masonry brickwork to match existing external finish. Entire building to be decorated Grey RAL 7016

BUILDING ROOF
Existing sales building flat roof to be retained. New flat roof to be installed over proposed extension.

SHOPFRONT
Part New Shopfront frames to be finished in Grey (RAL7016)
New fully glazed, single auto-sliding door, frames to be finished in Grey (RAL 7016)

CANOPY
Traditional steel framed canopy over forecourt w/o signage to be retained as is.
Canopy to be uplifted to 5.2m High

SURFACING
Existing forecourt surfacing retained as is. Install Asphalt to new footpath and kerbed areas.

BIN STORE
Proposed new bin store

0 10 20
SCALE - METRES - 1:200 @ A1

REV	DATE	DESCRIPTION	DRAWN/CHECKED
REVISION NOTES			

PLANNING

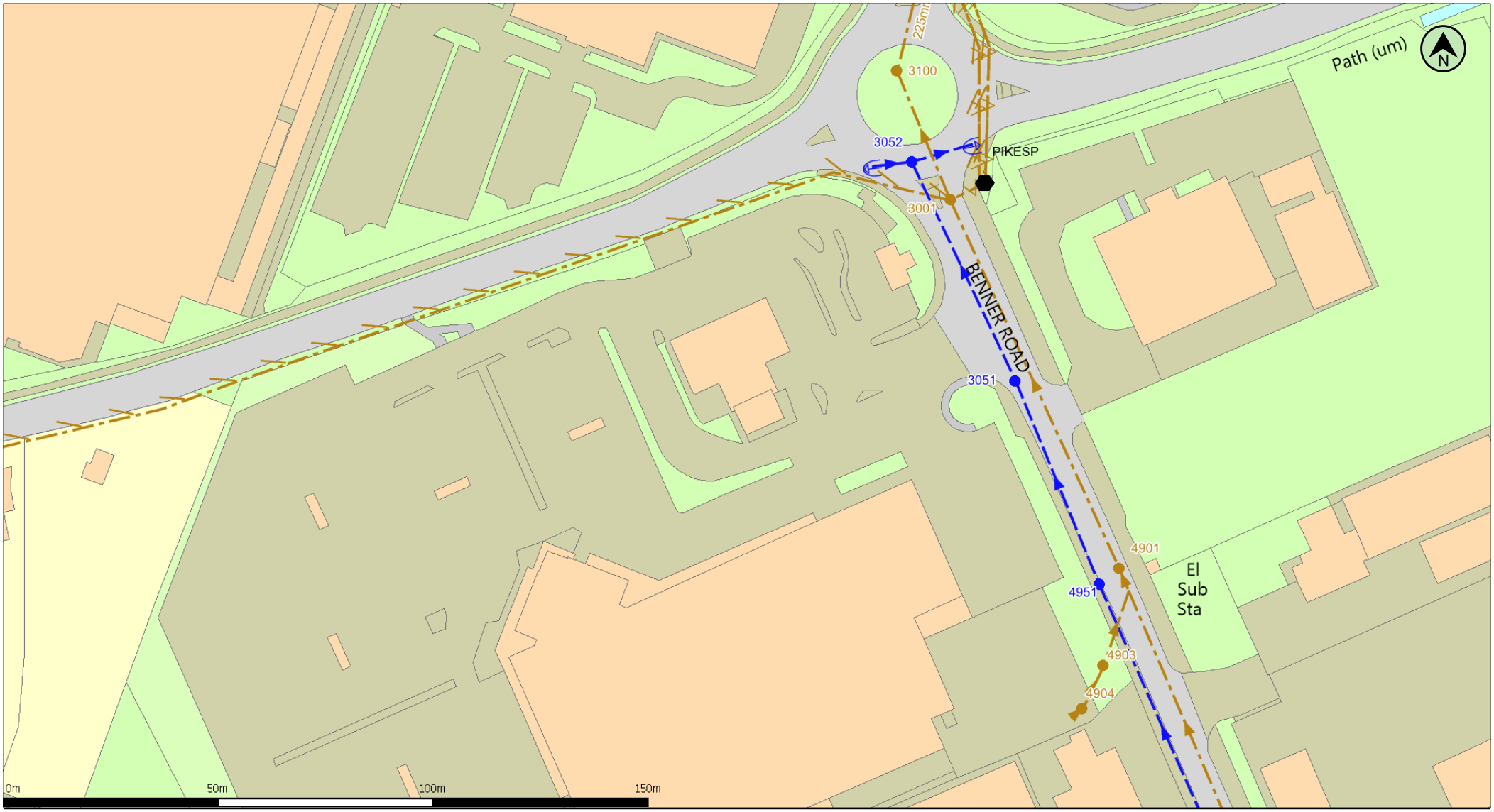
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CLIENT
mfg motor fuel group

PROJECT
FS2083 - PINCH BECK MORRISONS
WARDENTREE ROAD
SPALDING
PE11 3UU

DRAWING TITLE
PROPOSED SITE PLAN

DRAWN BY	DATE	SCALE	PAPER SIZE
DT	28.05.2024	1:200	A1
CHECKED BY	DRAWING NUMBER		REV.
JN	14314-FS2083-201		-



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Date: 22/08/24 Scale: 1:1250 Map Centre: 525328,325028 Data updated: 31/07/24 Our Ref: 1552448 - 1

Wastewater Plan A4
Powered by digdat

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Foul Sewer
Surface Sewer
Combined Sewer
Final Effluent
Rising Main*
Private Sewer*
Decommissioned Sewer*
Outfall*
Inlet*
Manhole*
Sewage Treatment Works
Public Pumping Station
Decomissioned Pumping Station
*(Colour denotes effluent type)

eleanor.benson@waterenvironment.co.uk

Morrisons Pinchbeck

love every drop
anglianwater

Manhole Reference	Liquid Type	Cover Level	Invert Level	Depth to Invert
3001	F	3.06	-0.03	3.09
3100	F	-	-	-
4901	F	3.09	0.379	2.711
4903	F	-	-	-
4904	F	-	-	-
3051	S	3.11	1.29	1.82
3052	S	3.18	1.21	1.97
4951	S	3.041	1.361	1.68

Manhole Reference	Liquid Type	Cover Level	Invert Level	Depth to Invert

Eleanor Benson

From: PSOWN <PSOWN@environment-agency.gov.uk>
Sent: 22 July 2024 11:31
To: Carlos Geoghegan
Cc: Lincs & Northants, Customer Enquiries
Subject: RE: Request for flood risk information. Our ref: CCN-2024-363332

Dear Carlos,

Thank you for your email.

After reviewing the data surrounding the site, the area is within Flood Zones 3 and 2, because the flood map for planning does not take account of any flood defences. The area is also within a pumped catchment under the Internal Drainage Boards (IDBs). Our Flood Maps for planning have used a model called the Fenland 2008-2009 model to determine the risk to the catchment if a rainfall event was to occur and the IDBs were not carrying out any of their pumping. This is very unrealistic, but it would show the natural floodplain without human interventions.

I hope this helped clarify any confusion and please get in touch if you have any further queries.

Kind regards,

Christopher Hill

FCRM Officer, Partnerships and Strategic Overview (Welland & Nene) | Lincolnshire and Northamptonshire

Environment Agency | Nene House, Pytchley Lodge Road, Kettering, NN15 6JQ

Christopher.hill@environment-agency.gov.uk |Team Email: PSOWN@environment-agency.gov.uk

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From: Carlos Geoghegan <Carlos.Geoghegan@waterenvironment.co.uk>
Sent: Thursday, July 18, 2024 10:20 AM
To: PSOWN <PSOWN@environment-agency.gov.uk>
Cc: Lincs & Northants, Customer Enquiries <LNenquiries@environment-agency.gov.uk>
Subject: RE: Request for flood risk information. Our ref: CCN-2024-363332

Hi Christopher,

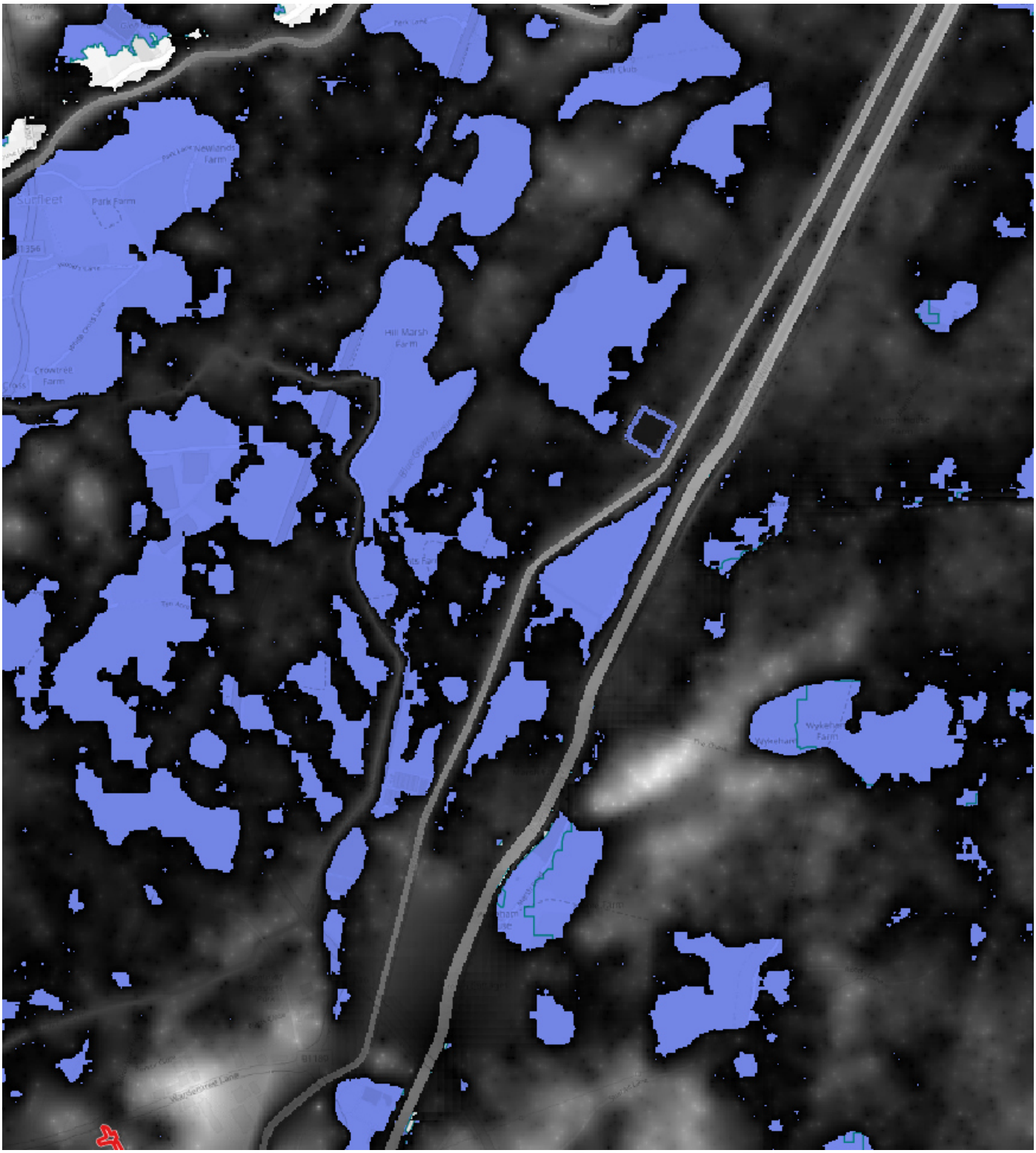
It appears as though we are missing fluvial flooding data as we have only received tidal breach data which is not near our site location.

We have checked Flood Zone 2 modelling data for (grid square TF) and it identifies the site as lying in an area affected by fluvial flooding.

We additionally overlayed the JFlow 1% AEP data over Flood Zone 3 (shown in screenshot), and can't figure out how the flood zone mapping has been derived in this location.
Please could you kindly confirm if there is or isn't addItional data for this site?

Kind regards,

Carlos



From: PSOWN <PSOWN@environment-agency.gov.uk>
Sent: Saturday, July 6, 2024 9:01 PM
To: Carlos Geoghegan <Carlos.Geoghegan@waterenvironment.co.uk>

Cc: Lincs & Northants, Customer Enquiries <LNenquiries@environment-agency.gov.uk>
Subject: Request for flood risk information. Our ref: CCN-2024-363332

Dear Carlos,

Enquiry regarding: Wardentree Lane, Pinchbeck

Thank you for your enquiry which was received on 7 June 2024.

I have enclosed available flood risk information for the site.

We respond to requests under the Freedom of Information Act 2000 and Environmental Information Regulations 2004. Please refer to the Open Government Licence which explains the permitted use of this information.

Product 5 (Modelling Reports) and Product 6 (Model Output Data)
Please find a Sharefile link below that will enable you to download the Product 5 and 6 for the Tidal Welland, 2011.

https://ea.sharefile.com/public/share/web-s0a265164d7df47a8a9f82f4e4c1bfa13

The product 7 for the model covering the site you have provided is too large to provide via sharefile link. For the product 7 we would request that you send a 1TB hard drive to the address below:

Nene House & Kettering Depot, Pytchley Ln, Kettering NN15 6JQ

Please review the product 5 and 6 provided and should the product 7 be required then we can arrange to get that to you in due course.

Please note this link will expire in 30 days.

This information is not available with the Open Government Licence but we may be able to license to you under the Environment Agency Conditional Licence:

Conditional Licence regarding: Tidal Welland, 2011 Report

- ***Modelling Reports for the Tidal Welland, 2011.*** Hydraulic model report. **File format:** Adobe PDF (.pdf) format.
  Attribution 1) Contains Environment Agency information © Environment Agency and/or database rights. **2)** May contain Ordnance Survey data © Crown copyright 2024 Ordnance Survey AC0000807064.
- ***Model Output Data for the Tidal Welland, 2011***. Extents, grids and model node files for the Tidal Welland, 2011. **File format:** Various GIS file format.
  Information Warnings 1) Please be aware that model data is not raw, factual or measured but comprises of estimations or modelled results based on the data available to us.
  Attribution 1) Contains Environment Agency information © Environment Agency and/or database rights.

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3. We have restricted use of the Information as a result of legal restrictions placed upon us to protect the rights or confidentialities of others. In this instance it is because of third party data. If you contact us in writing (this includes email) we will, as far as confidentiality rules allow, provide you with details including, if available, how you might seek permission from a third party to extend your use rights.

4.1 The Information may contain some data that we believe is within the definition of "personal data" under the Data Protection Act 1998 but we consider that we will not be in breach of the Act if we disclose it to you with conditions set out in this condition and the conditions above. This personal data comprises names of individuals or commentary relating to property that may be owned by an individual or commentary relating to the activities of an individual.

4.2 Under the Act a person who holds and uses or passes to others personal data is responsible for any compliance with the Act and so we have no option but to warn you that this means you have responsibility to check that you are compliant with the Act in respect of this personal data.

5. The location of public water supply abstraction sources must not be published to a resolution more detailed than 1km^2. Information about the operation of flood assets should not be published.

6.1 Where we have supplied model data which may include model inputs or outputs you agree to supply to the Environment Agency copies of any assessments/studies and related outputs, modifications or derivatives created pursuant to the supply to you of the Information, all of which are hereinafter referred to as "the Data".

6.2 You agree, in the public interest to grant to the Environment Agency a perpetual royalty free non-exclusive licence to use the Data or any part thereof for its internal purposes or to use it in any way as part of Environment Agency derivative products which it supplies free of charge to others such as incorporation into the Environment Agency's Open Data mapping products.

The above information is supplied for use, for the following project only:

- **Project title:** Flood Risk Assessment for Wardentree Lane, Pinchbeck
- **Start date:** 05/07/2024
- **Expected end date:** 05/07/2026

However, you MUST first check the supporting information available online to determine if the conditions on use are suitable for your purposes. If they aren't, this information is not provided with a licence for use, and the data is provided for read right only.

Please get in touch if you have any further queries or contact us within two months if you'd like us to review the information we have sent, quoting the CCN reference number.

Regards,

Christopher Hill

FCRM Officer, Partnerships and Strategic Overview (Welland & Nene) | Lincolnshire and Northamptonshire
Environment Agency | Nene House, Pytchley Lodge Road, Kettering, NN15 6JQ

Christopher.hill@environment-agency.gov.uk |Team Email: PSOWN@environment-agency.gov.uk

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Information in this message may be confidential and may be legally privileged. If you have received this message by mistake, please notify the sender immediately, delete it and do not copy it to anyone else. We have checked this email and its attachments for viruses. But you should still check any attachment before opening it. We may have to make this message and any reply to it public if asked to under the Freedom of Information Act, Data Protection Act or for litigation. Email messages and attachments sent to or from any Environment Agency address may also be accessed by someone other than the sender or recipient, for business purposes.

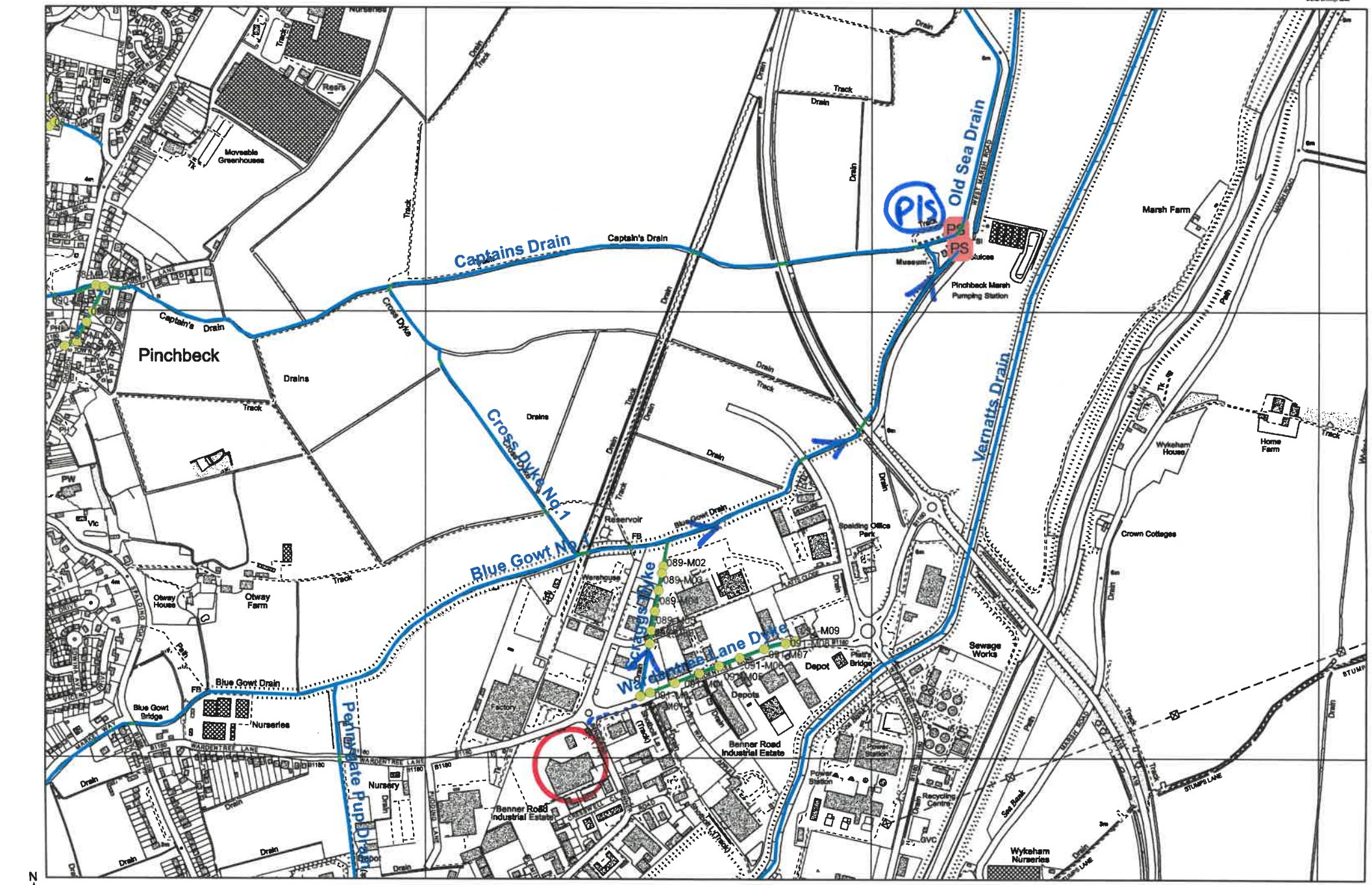
= BOARD MAINTAINED WATERCOURSES

= SITE LOCATION

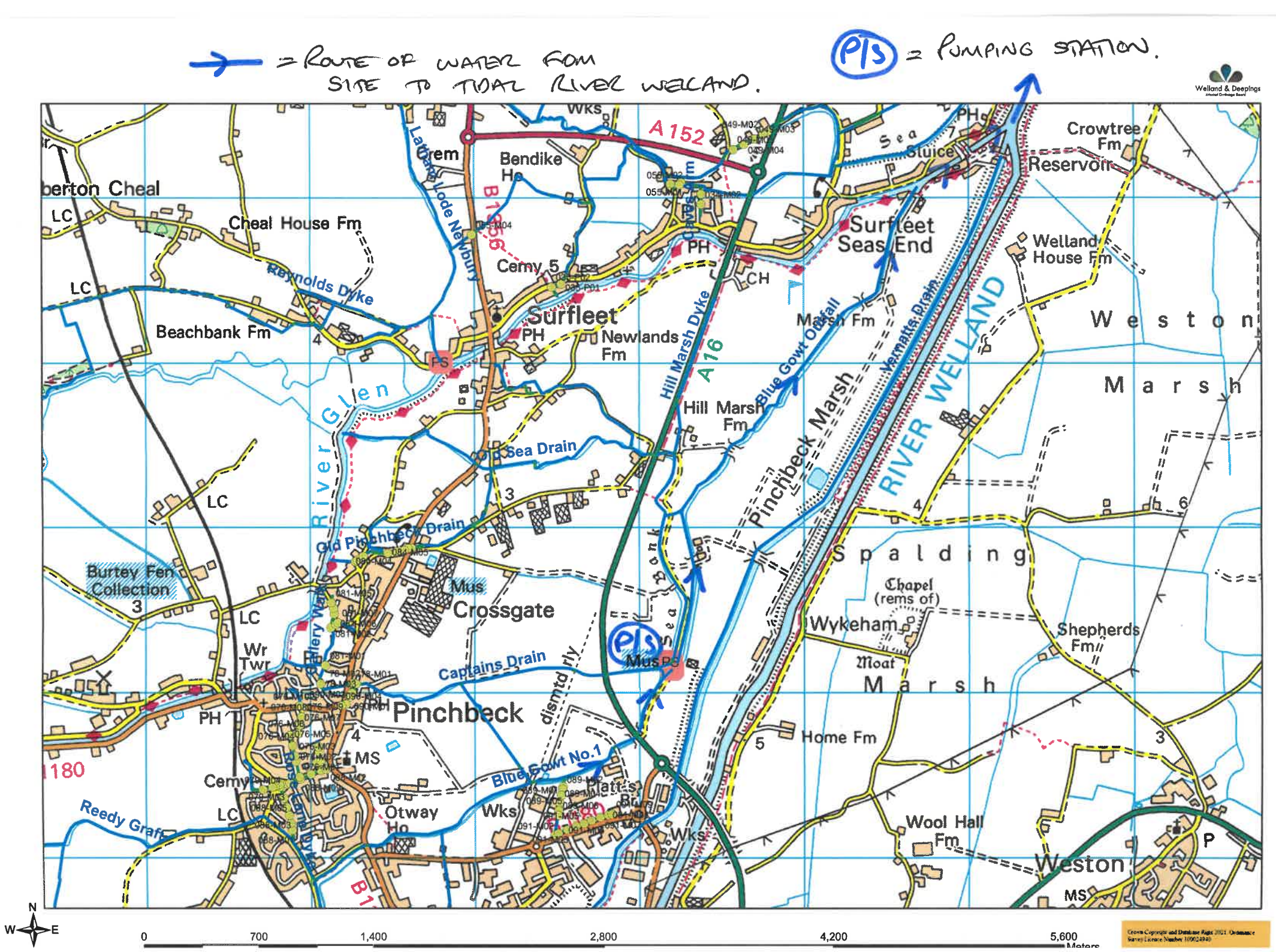
= FLOW DIRECTION.

PS = PUMPING STATION

Welland & Deepings Internal Drainage Board



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→ = ROUTE OF WATER FROM SITE TO TIDAL RIVER WELLAND.
PS = PUMPING STATION.
Welland & Deepings Internal Drainage Board
A152
A16
B1356
B1180
Crowtree Fm
Reservoir
Sea Sluice
PH
Surfleet Seas End
Welland House Fm
Weston Marsh
Surfleet
Cemy 5
Newlands Fm
Marsh Fm
Hill Marsh Fm
Hill Marsh Dyke
Blue Gowt Outfall
Nemaths Drain
RIVER WELLAND
Pinchbeck Marsh
Spalding
Chapel (rems of)
Wykeham
Shepherds Fm
Moat
Marsh
Home Fm
Wool Hall Fm
Weston
MS
P
Cheal House Fm
Beachbank Fm
Reynolds Dyke
Latham's Lode Newbury
Bendike Ho
Wks
River Glen
Sea Drain
Old Pinchbeck Drain
Burtey Fen Collection
Mus
Crossgate
Wr Twr
Battery Wash
Captains Drain
dismtd rly
Pinchbeck
Cemy
Otway Ho
Reedy Graft
Blue Gowt No.1
Platt's Br
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