SLOUGH MULTIFUEL PROJECT

SLOUGH MULTIFUEL EXTENSION PROJECT

[PINS Ref: EN010129]

Environmental Statement
Volume 3 – Appendix

Appendix 12A - Flood Risk Assessment

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Slough Multifuel Extension Project

Preliminary Flood Risk Assessment

SSE Slough Multifuel Limited

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July 2022

Delivering a better world

Quality information

Prepared by	Checked by	Verified by	Approved by
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Revision History

Revision	Revision date	Details	Authorized	Name	Position
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1. Introduction

1.1 Commission

AECOM Limited (AECOM) has been commissioned by SSE Slough Multifuel Limited (known as 'The Client' hereafter) to produce a Flood Risk Assessment (FRA) to support a Development Consent Order (DCO) Application for the Slough Multifuel Extension Project (hereafter referred to as the 'Proposed Project'). The Proposed Project comprises works to increase the efficiency and output of a generating station consented in June 2017 (hereafter referred to as the 'Consented Development') under the Town and Country Planning Act 1990 (Ref 1) (TCPA) regime with capacity up to 50 megawatts (MW) (Planning Ref. P/00987/024 and P/00987/025). As the electrical output now exceeds 50MWe the Proposed Project requires a Development Consent Order under Section 31, 14(1)(a) and 15 of The Planning Act 2008 (Ref 2). The increase in gross generation capacity will be achieved through a number of physical works that are 'engineering operations' and result in an extension of the existing Slough Multifuel generating station.

1.2 Background

The Consented Development was granted planning permission by Slough Borough Council (SBC) in June 2017 and site works commenced in May 2021. The land for the Proposed Project (the 'Site') is located on part of the Slough Heat and Power (SHP site at 342 Edinburgh Avenue, Slough, SL1 4TU, approximately 2.5 kilometres (km) northwest of Slough Town Centre, within the Slough Trading Estate, grid reference SU 953 814 ,shown on the Site Boundary Plan (Appendix B). Demolition work is already complete onsite, with construction works underway and with steel works expected to be visible above ground at the time of submitting the application for the Proposed Project.

The Slough Multifuel Facility will be a multifuel generating station which will convert Waste Derived Fuel (WDF) into low carbon electricity and heat. The Proposed Project involves improving the efficiency by increasing gross generation capacity above 50MWe, alongside internal engineering works (further details are provided in Section 2.6 of this FRA), which together represent the 'Extension' of the Slough Multifuel Generation Station.

The Environment Agency Flood Map for Planning (FMfP) available online[1] (and reproduced as Figure 4.1), shows the Site is located in Flood Zone 1. The definition of flood zones, according to the Planning Practice Guidance[2] (PPG), are summarised in Table 1.1.

The National Planning Policy Framework[3] (NPPF) and the PPG specifies that planning applications for development proposals located within Flood Zone 2 or 3 (river and sea flooding) or in Flood Zone 1 when the site area exceeds 1ha should be accompanied by a Flood Risk Assessment (FRA) that identifies and assesses all forms of flooding to and from the development. The FRA should demonstrate how these flood risks will be managed so that the development remains safe throughout its lifetime, taking into

[1] Environment Agency. Flood Map for Planning. Available at: https://flood-map-for-planning.service.gov.uk/
[2] Communities and Local Government, (2021); Planning Practice Guidance. Available at: http://planningguidance.planningportal.gov.uk
[3] Communities and Local Government, (2021); National Planning Policy Framework. Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2

account the vulnerability of the Proposed Project and the potential impact of climate change on flood risk.

Table 1.1 Environment Agency Flood Zone Definitions

Flood Zone	Definition	Risk of flooding
Flood Zone 1	Land that has a low probability of flooding (less than 1 in 1,000 annual probability of river or sea flooding (<0.1%))	Low
Flood Zone 2	Land that has a medium probability of flooding (between 1 in 100 and 1 in 1,000 annual probability of river flooding (0.1-1%), or between 1 in 200 and 1 in 1,000 annual probability of sea flooding (0.1-0.5%)	Medium
Flood Zone 3a	Land that has a high probability of flooding (1 in 100 year or greater annual probability of river flooding (>1%), or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%)	High
Flood Zone 3b (Functional Floodplain)	This zone comprises land where water has to flow or be stored in times of flood.	Very High

Source: Planning Practice Guidance (2021)

1.3 Scope of Services

The aim of this study is to undertake a FRA that is appropriate to the nature and scale of the Proposed Project. The FRA determines flood risk posed to the Proposed Project Site (the 'Site') and arising as a result of the Proposed Project and recommends suitable mitigation measures where required.

The objectives of this report are to:

- Collect and review existing information relating to flood risk posed to the Site from all sources (including tidal, fluvial, surface water, groundwater, artificial sources and sewer and drainage infrastructure);
- Assess the flood risk to the Site under existing and post-development conditions (taking into account climate change); and
- Outline any mitigating measures needed to ensure the Proposed Project and its users will be safe for the lifetime of the development.

1.4 Data Sources

The baseline conditions for the Site have been established through a desk study using publicly available information and previous consultation undertaken with the Environment Agency.

Data collected and used to inform this assessment is summarised in Table 1.2.

Table 1.2 Sources of Data Reviewed

Purpose	Data Source	Comments
Identification of Hydrological Features	1: 10,000 Ordnance Survey (OS) mapping	Identifies the position of the Site, local hydrological features, and riparian owners.
Historical Land Use and Hydrological Features	Historic OS maps dating back from 1842- Present[4]	Identifies historical land use change and hydrological features over the last 176 years.
Identification of Existing Flood Risk	Environment Agency FMfP (online1)	Identifies fluvial/ tidal inundation extents.
	Environment Agency Long Term Flood Risk Maps (online[5])	Identification of flood risk from surface water and reservoirs.
	EA Groundwater Conditions Map[6]	Identification of groundwater designations through geology.
	Thames: Catchment Flood Management Plan[7] Slough Borough Council Preliminary Flood Risk Assessment (PFRA)[8] Slough Borough Council Strategic Flood Risk Assessment (SFRA) – 2012[9] Slough Borough Council Local Flood Risk Management Strategy (2016) (LFRMS)[10] Previous consultation with Slough Borough Council (Appendix A)	Assesses flood risk across the Slough Borough Council boundary area. Includes flood risk from fluvial/tidal, sewers, overland flow and groundwater.
	British Geological Survey (BGS) records[11]	Provides details of geology and hydrogeology in the vicinity of the Site.
Identification of Historical Flooding	Slough Borough Council SFRA	Provides details of historical flooding.

[4] Ordnance Survey. Maps from 1857-1986. Available at: [redacted]
[5] Environment Agency. Flood Risk from Surface Water Available at: https://flood-warning-information.service.gov.uk/long-term-flood-risk/map?map=SurfaceWater
[6] Environment Agency. Groundwater. Available at: http://magic.defra.gov.uk/MagicMap.aspx
[7] Environment Agency (2009). Thames: Catchment Flood Management Plan. Available at: https://www.gov.uk/government/publications/grimsby-and-ancholme-catchment-flood-management-plan
[8] Slough Borough Council (2011) Preliminary Flood Risk Assessment (PFRA). Available at: https://webarchive.nationalarchives.gov.uk/ukgwa/20140328094444/http:/www.environment-agency.gov.uk/research/planning/135542.aspx
[9] Slough Borough Council (2021). Strategic Flood Risk Assessment (SFRA). Available at: https://www.slough.gov.uk/downloads/download/772/strategic-flood-risk-assessment-sfra-march-2021-draft-revision-4
[10] Slough Borough Council (2013). Local Flood Risk Management Strategy. Available at: https://www.slough.gov.uk/downloads/download/771/local-flood-risk-management-strategy-for-slough
[11] British Geological Survey (BGS) records. Available at: [redacted]

Purpose	Data Source	Comments
	Slough Borough Council PFRA Previous consultation with Slough Borough Council (Appendix A)	
Details of the Proposed Project	Site Boundary Plan (Appendix B)	Provides a site boundary plan of the Proposed Project
Existing drainage infrastructure	Drainage Layout Plan (Appendix C)	Provides the latest drainage infrastructure layout for the Site

2. Site Information

2.1 Site Location and Context

The Site is located within the existing Slough Heat and Power site (the 'SHP Site') and includes the site for the Consented Development. It is situated within the Slough Trading Estate. The Slough Trading Estate is a major employment area within Slough, approximately 3km north-west of Slough town centre. The Site is broadly the same as the site for the Consented Development, except it now includes Cooling Tower 8 which was not included in the Consented Development as it was part of the central site services. The National Grid Reference for the centre of the Site is SU 95394 81503.

The Site is located both to the north and south of Edinburgh Avenue and previously contained impermeable hardstanding and numerous buildings and structures including boiler houses, turbine halls, fuel storage facilities, switch rooms, control rooms, offices and various other ancillary plants associated within power generation. These decommissioned plant and buildings have been cleared in advance of construction work starting on the Consented Development which commenced in May 2021.

Access to the Site is gained via the following:

1. The main HGV access point in the north-west of the Site which will have lockable gates and a barrier;
2. Access off Greenock Road, to the south of the Site;
3. Car access off Harwich Road located immediately to the south of the package boiler in the south-east corner of the SHP site;
4. Car access via 342 Edinburgh Avenue to the staff car park;
5. The HGV exit to Edinburgh Avenue in the north-east of the Site. This will have an auto-activated gate; and
6. A manually operated gate to access the Cooling Tower compound for either small lorries or pedestrians located mid-point between the two towers along Edinburgh Avenue.

The maximum extents of the Proposed Project are shown in the Site Boundary Plan (Appendix B).

2.2 Local Water Features

The following local water features in close proximity to the Site have been identified through the inspection of ordnance survey (OS) 1: 10,000 mapping:

- Chalvey Brook runs approximately 950m to the west of the Site, whilst Salt Hill Stream runs approximately 1.1km to the east of the Site. Both watercourses are designated as EA Main Rivers
- Haymill Valley Stream, an Ordinary Watercourse under the jurisdiction of SBC, runs approximately 1.15km west of the Site.

There are no other surface water features located in the area local to the Site.

2.3 Historical Land Use

The Slough Trading Estate was established in April 1920 when the land was purchased from the War Office and had been used to repair and recycle ex War

Department Vehicles. At this time there was a small coal fired power station and approximately 30 buildings on the Estate.

Over the subsequent decade the area was transformed into the Trading Estate and was largely occupied by industrial tenants. As the estate grew, so did the power station and its associated electricity/steam/potable water distribution infrastructure. Some infrastructure has also been removed over the years with direct deliveries of coal and oil to the power station by rail ceasing in 1969 and 1973 respectively. The railway siding was used for oil deliveries post 1973 and surrendered in 2007.

A utility body was eventually set up as a separate business called “Slough Heat and Power (SHP)”, but still owned by the owners of the Slough Trading Estate. Since this time the Trading Estate has continued to evolve, and the mix of tenants has changed over time and now includes knowledge-based industries, warehouses, and retail whilst the Trading Estate still retains some manufacturing tenants. Over the years, the demand for energy has also constantly evolved as the customer base has changed. The SHP Site has, therefore, been used for power and heat generation purposes for about 100 years.

2.4 Topography

The SFRA states that the Slough Borough is situated on two terraces, the upper terrace and the river terrace. The land slopes from north to south, and west to east.

The topography at the Site is predominately flat and approximately 32m above ordnance datum (AOD).

2.5 Geology and Hydrogeology

Information considered pertinent to the Site has been taken from the British Geological Survey and is summarised in Table 2.1.

Table 2.1 Geological and Hydrogeological Information for the Site

	Geological Unit	Permeability	Aquifer Status
Made Ground	Reinforced concrete overlying fill material up to a depth of 0.5m, comprising dark brown silty fine to coarse sand with some flint and slag gravel.	N/A	Non-aquifer
Superficial Geology	Langley Silt Member – Clay and Silt, superficial deposits formed up to 2 million years ago in the Quaternary Period underly the Site.	Very low to high	Moderately Productive Aquifer with intergranular flow defined as the primary flow mechanism.

	Geological Unit	Permeability	Aquifer Status
Solid Geology	Lambeth Group – Clay, Silt and Sand, sedimentary bedrock formed 48 to 59 million years ago in the Palaeogene Period underlies the Site.	Low	Principal Aquifer – Layers of rock or drift deposits that have high intergranular and/or fracture permeability, meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale.

Source: https://www.bgs.ac.uk/map-viewers/geology-of-britain-viewer/

The Environment Agency Groundwater Mapping indicates that the Site falls within Source Protection Zone 3 (SPZ). Groundwater SPZs monitor the risk of contamination from any activities that may cause pollution to the surrounding area.

2.6 The Proposed Project

The Proposed Project involves increasing the capacity of the Consented Development. This will be achieved through mechanical modification of the Consented Development and provision of systems including:

- Heat exchanger bundles (internal to the existing consented scheme building envelope);
- External and internal above ground pipework and valves;
- Pipe supports (external and internal);
- Thermal insulation (external and internal works);
- Instrumentation (internal to the existing consented scheme building envelope);
- Cabling and containment (internal); and
- Mechanical modifications to the steam turbine inlet control system (internal works).

The increase in efficiency and generating capacity will not require any increase in the hourly throughput of WDF or in the number of approved deliveries to the facility. The consented building envelope and architecture of the Consented Development, currently under construction, will remain unchanged.

During the construction phase, one or more temporary construction compounds will be required to facilitate storage and access to all land within the Site.

Water consumption will not increase as a consequence of the Proposed Project. There may be a small decrease in water consumption due to a reduced evaporative loss as a result of an increase in efficiency. There will be no change to the water discharge from the Proposed Project above that discharged from the Consented Development.

3. Planning Policy and Guidance

The Sections below consider the planning policies and guidance of relevance to the Proposed Project with regards to flood risk from all sources and appropriate mitigation measures which should be considered.

3.1 National Planning Policy Context

3.1.1 National Policy Statements for Energy

The National Policy Statements (NPSs) for Energy set the framework for decisions on proposals for new energy infrastructure.

The NPSs that are of relevance to the Proposed Project are the:

- Overarching National Policy Statement for Energy (EN-1)[12] (Ref 6) ('EN-1'); and the
- National Policy Statement for Renewable Energy Infrastructure (EN-3)[13] (Ref 7) ('EN-3').

The aims of EN-1 for development and flood risk are to ensure that flood risk from all sources of flooding is taken into account at all stages in the planning process, to avoid inappropriate development in areas at risk of flooding and to direct development away from areas at highest risk. Where new energy infrastructure is, exceptionally, necessary in such areas, policy aims to make it safe without increasing flood risk elsewhere and where possible, reducing flood risk overall. The Proposed Project is classed as 'Essential Infrastructure' and, therefore, acceptable even in high flood risk areas (Paragraph 5.7.3).

The EN-1 policy states *"all applications for energy projects of 1 hectare or greater in Flood Zone 1 and all proposals for projects located in Flood Zones 2 and 3 should be accompanied by a flood risk assessment (FRA). This should identify and assess the risks of all forms of flooding to and from the project and demonstrate how these flood risks will be managed, taking climate change into account"* (Paragraph 5.7.4).

The minimum requirements for FRAs as set out in the EN-1 policy are that they should:

- Be proportionate to the risk and appropriate to the scale, nature and location of the project;
- Consider the risk of flooding arising from the project, in addition to the risk of flooding to the project;
- Take the impacts of climate change into account, clearly stating the development lifetime over which the assessment has been made;
- Be undertaken by competent people, as early as possible in the process of preparing the proposal;
- Consider both the potential adverse and beneficial effects of flood risk management infrastructure, including raised defences, flow channels, flood storage areas and other artificial features, together with the consequences of their failure;

[12] Department of Energy and Climate Change (2011) Overarching National Policy Statement for Energy (EN-1)
[13] Department of Energy and Climate Change (2011) National Policy Statement for Renewable Energy Infrastructure (EN-3)

- Consider the vulnerability of those using the site, including arrangements for safe access;
- Consider and quantify the different types of flooding (whether from natural or human sources and including joint and cumulative effects) and identify flood risk reduction measures, so that assessments are fit for the purpose of the decisions being made;
- Consider the effects of a range of flooding events, including extreme events on people, property, the natural and historic environment and river and coastal processes;
- Include the assessment of the remaining (known as 'residual') risk after risk reduction measures have been taken into account and demonstrate that this is acceptable for the particular project;
- Consider how the ability of water to soak into the ground may change with development, along with how the proposed layout of the project may affect drainage systems;
- Consider if there is a need to be safe and remain operational during a worst-case flood event over the development's lifetime; and
- Be supported by appropriate data and information, including historical information on previous events.

The EN-1 policy notes that the latest set of UK Climate Projections should be used in assessments to ensure the appropriate adaptation measures have been identified. "Applicants should apply, as a minimum, the emissions scenario that the independent Committee on Climate Change suggests the world is currently most closely following – and the 10%, 50% and 90% estimate ranges. These results should be considered alongside relevant research which is based on the climate change projections such as Environment Agency Flood Maps (Paragraph 4.8.7).

Paragraph 4.8.5 of the policy states that *"New energy infrastructure will typically be a long-term investment and will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the impacts of climate change when planning the location, design, build, operation and, where appropriate, decommissioning of new energy infrastructure"*.

In relation to flood risk EN-3 notes that Energy from Waste generating stations may require significant water resources but are less likely to be proposed for coastal sites. For these proposals applicants should consider, in particular, how plant will be resilient to the increased risk of flooding.

The National Policy Statements for Energy are currently under review by the Government with draft versions of both EN-1 and EN-3 undertaking public consultation between September and November 2021. The proposed amendments to the draft documents do not change the requirements in terms of assessing flood risk for the Proposed Project.

3.1.2 National Planning Policy Framework (NPPF)

The NPPF was originally published in March 2012 and last revised in July 2021. It is supported by the Planning Practice Guidance (PPG).

The NPPF and PPG must be taken into account in the preparation of local and neighbourhood plans and are a material consideration in planning decisions. It

constitutes guidance for local planning authorities (LPAs) and decision-takers, both in drawing up plans and as a material consideration in determining applications.

The NPPF and PPG recommend that Local Plans should be supported by a SFRA and develop policies to manage flood risk from all sources. This should take into account advice from the Environment Agency and other relevant flood risk management bodies, such as LLFAs and Internal Drainage Boards (IDBs). Local Plans should apply a sequential, risk-based approach to the location of developments. This is done to seek to mitigate flood risk to people and property and manage any residual risk, taking account of the impacts of climate change, by:

- Applying the Sequential Test;
- Applying the Exception Test, if necessary;
- Safeguarding land from development that is required for current and future flood management;
- Using opportunities offered by new development to reduce the causes and impacts of flooding; and
- Seeking opportunities to facilitate the relocation of existing development, including housing, to more sustainable locations if climate change is expected to increase flood risk.

The NPPF states that when determining planning applications, Local Planning Authorities (LPA) should ensure that flood risk is not increased elsewhere. Where appropriate, applications should be supported by a site-specific FRA. Development should only be allowed in areas at risk of flooding where, in light of this assessment (and the sequential and exception tests, as applicable) it can be demonstrated that:

- Within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location;
- The development is appropriately flood resistant and resilient;
- It incorporates Sustainable Drainage Systems (SuDS), unless there is clear evidence that this would be inappropriate;
- Any residual risk can be safely managed; and
- Safe access and escape routes are included where appropriate, as part of an agreed emergency plan.

Major developments should incorporate SuDS unless there is clear evidence that this would be inappropriate. The systems used should:

- Take account of advice from the Lead Local Flood Authority;
- Have appropriate proposed minimum operational standards;
- Have maintenance arrangements in place to ensure an acceptable standard of operation for the lifetime of the development; and
- Where possible, provide multifunctional benefits.

3.1.2.1 The Sequential and Exception Tests

The overall aim of the Sequential Test is to steer new development to areas designated as Flood Zone 1. Where there are no reasonably available sites in Flood Zone 1 areas, LPAs allocating land in Local Plans or determining planning applications for development at any particular location should take into account the flood risk

vulnerability of land uses and consider reasonably available sites in Flood Zone 2 areas, applying the Exception Test if required. Only where there are no reasonably available sites in Flood Zone 1 or 2 areas should the suitability of sites in Flood Zone 3 be considered, taking into account the flood risk vulnerability of land uses and applying the Exception Test if required.

For the Exception Test to be passed:

- It must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk, informed by a SFRA where one has been prepared; and,
- A site-specific FRA must demonstrate that the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere and, where possible, will reduce flood risk overall.

Both elements of the test will have to be passed for development to be allocated or permitted.

3.1.2.2 Development and Flood Risk Vulnerability

The NPPF considers the vulnerability of different forms of development to flooding and classifies proposed uses accordingly.

Section 7, Paragraph 66 of the PPG illustrates a matrix which identifies which vulnerability classifications are appropriate within each flood zone. This can be seen below in Table 3.1.

Table 3.1 Flood Risk Vulnerability and Flood Zone Compatibility

Flood Risk Vulnerability Classification	Essential Infrastructure	Water Compatible	Highly Vulnerable	More Vulnerable	Less Vulnerable
Flood Zone 1	✓	✓	✓	✓	✓
Flood Zone 2	✓	✓	Exception test required	✓	✓
Flood Zone 3a	Exception test required	✓	×	Exception test required	✓
Flood Zone 3b (Functional Floodplain)	Exception test required	✓	×	×	×

Key
✓ Development is appropriate.
× Development should not be permitted

The NPS for Energy EN-1 states that the Proposed Project is considered '*Essential Infrastructure*'. The Proposed Project will seek to increase the efficiency of operations therefore lengthening the lifecycle of the station and reduce its emissions (when based

on kWh), contributing towards the core strategy aim of achieving more sustainable, and eventually net zero development, in Slough. The Environment Agency also classes the Proposed Project as Essential Infrastructure (essential utility infrastructure which has to be located in a flood risk area for operational reasons, including infrastructure for electricity supply) by in Table 3.1 (flood risk vulnerability classification) of the Flood Risk and Coastal PPG[14].

The Environment Agency FMfP indicates the Site is located in Flood Zone 1, and as such, based on the classification shown in Table 3.1, the Sequential Test is passed, and the Exception Test is therefore not required.

3.2 Local Planning Policy

3.2.1 Slough Borough Council Core Strategy

The Slough Borough Council Core Strategy was adopted in 2008[15] and sets out the key issues to be addressed, and how this will be achieved through the spatial vision, strategic objectives, spatial strategy and supporting policies for addressing the social, economic and environmental issues for development across the borough, from April 2006 to March 2026.

A new Local Plan is currently in progress to set out how to guide development in Slough through to 2036 and update the existing Core Strategy, Site Allocations and Local Plan saved policies.

The relevant policies are summarised in Table 3.2.

Table 3.2 Relevant Core Strategy Policies

Relevant Policy	Sub-Category	Summary
Policy 8: Sustainability and the Environment	7.144	Core strategy has taken account of emerging Government policy on Climate Change and the aim of achieving zero carbon development. Development undertaken at a local level should not make worse the wider impacts of climate change resulting from carbon emissions. Therefore new development should be constructed in a manner so as to minimise its impact on the environment both in the short and longer term. This will involve using sustainable design and construction techniques, minimising consumption and waste and incorporating renewable energy technology within development.

[14] Environment Agency (2014). Flood Risk and Coastal Guidance. Available at: https://www.gov.uk/guidance/flood-risk-and-coastal-change#Table-3-Flood-risk-vulnerability

[15] Slough Borough Council (2006) Core Strategy. Available at: https://www.slough.gov.uk/downloads/download/581/development-plan-core-strategy-2006---2026

Relevant Policy	Sub-Category	Summary
		The council will also take account of the possible effects of Climate Change in applying policies such as those related to flood risk.
Policy 10: Infrastructure	7.182	Development will only be allowed where there is sufficient existing, planned or committed infrastructure. All new infrastructure must be sustainable. Where existing infrastructure is insufficient to serve the needs of new development, the developer will be required to supply all reasonable and necessary on-site and off-site infrastructure improvements. These improvements must be completed prior to the occupation of a new development and should serve both individual and communal needs.
	7.185	The provisions of reasonable and necessary infrastructure will be secured through planning obligations or by conditions attached to planning permissions. Work on the Strategic Flood Risk assessment has shown that improvements to localised drainage systems may be required. Where Sustainable Drainage Systems (SUDS) are provided in accordance with Core Policy 8, developers will be expected to pay for the ongoing maintenance of this infrastructure.

Source: < https://www.slough.gov.uk/downloads/download/581/development-plan-core-strategy-2006---2026

3.3 Other Relevant Policy and Guidance

3.3.1 Thames River Basin District Flood Risk Management Strategy

The Thames River Basin District Strategy[16] sets out the Environment Agency's vision for managing the risk of flooding from the River Thames to respond to climate change and sea level rise. The Proposed Project lies within the Maidenhead to Sunbury catchment. The Proposed Project is not located within a Flood Risk Area.

3.3.2 Thames Catchment Flood Management Plan (CFMP)

In 2009, a CFMP was produced by the Environment Agency for the Thames Catchment[17] addressing the scale and extent of flooding both now and in the future and setting policies for managing flood risk. In the area considered in relation to the Proposed Project, (Sub-area 9) the CFMP addresses the management of culverted

[16] Environment Agency (2016) Thames River Basin District Flood Risk Management Strategy. Summary Document
[17] Environment Agency (2009) Thames Catchment Flood Management Plan

watercourses in heavily populated urban catchments, including Slough. This approach relies on a lot of blockage prevention measures (e.g., clearing of trash screens) which become increasingly ineffective against storms which are expected to be more frequent and intense in the future.

The vision and preferred management policy for the sub-area is Policy option 4: Areas of low, moderate or high flood risk where the Environment Agency are already managing the flood risk effectively but where further actions may be taken to keep pace with climate change.

3.3.3 Slough Borough Council Local Flood Risk Management Strategy (LFRMS)

As a LLFA, Slough Borough Council has a responsibility to develop a LFRMS[10] which sets out a clear plan for future flood risk management in the region, ensuring people, businesses communities and other risk management authorities have an active role in how flood risk is managed.

The LFRMS sets out how the Council intends to identify where flooding can be reduced or managed in a sustainable manner and to alleviate where possible the misery, economic damage and social disruption that flooding causes.

3.3.3.1 Slough Borough Council Strategic Flood Risk Assessment (SFRA)

The Slough Borough Council Level 1 SFRA[9] was published in 2012 to support the assessment of development sites in relation to flood risk. The SFRA was completed in consultation with the Environment Agency and Thames Water to provide information on the probability of flooding. The report also takes into account the impacts of Climate Change.

It is intended that the SFRA will be used by SBC's planning department to inform the application of the Sequential Test when allocating land or determining applications, in line with the NPPF.

4. Baseline Flood Risk Assessment

The NPPF requires the effects of all sources of flood risk to and from a development are considered within a FRA. The FRA should demonstrate how identified risks should be managed so that the development remains safe throughout its lifetime, taking into account climate change.

This review was undertaken using publicly available information to assess the flood risk at the Site.

4.1 Historical Flooding

The SFRA[9] records indicate that Edinburgh Avenue, the access road to the Proposed Project, was affected by surface water flooding during the following flood events:

- August / September 2008: Heavy rainfall resulted in surface water and fluvial flooding;
- August 2015: A failed Thames Water surface water pump station and collapsed storm overflow pipe caused by recent utility works in combination with a high volume of surface water runoff resulted in surface water flooding; and
- May 2016: Heavy silted surface sewers resulted in surface water flooding.

4.2 Flooding from Fluvial and Tidal Sources

The Flood Map for Planning (shown in Figure 4.1) illustrates that the Site is located within Flood Zone 1 (low risk) defined as land having < 1000% / 0.1 % AEP (less than a 1 in 1000 chance in any year) of river or sea flooding.

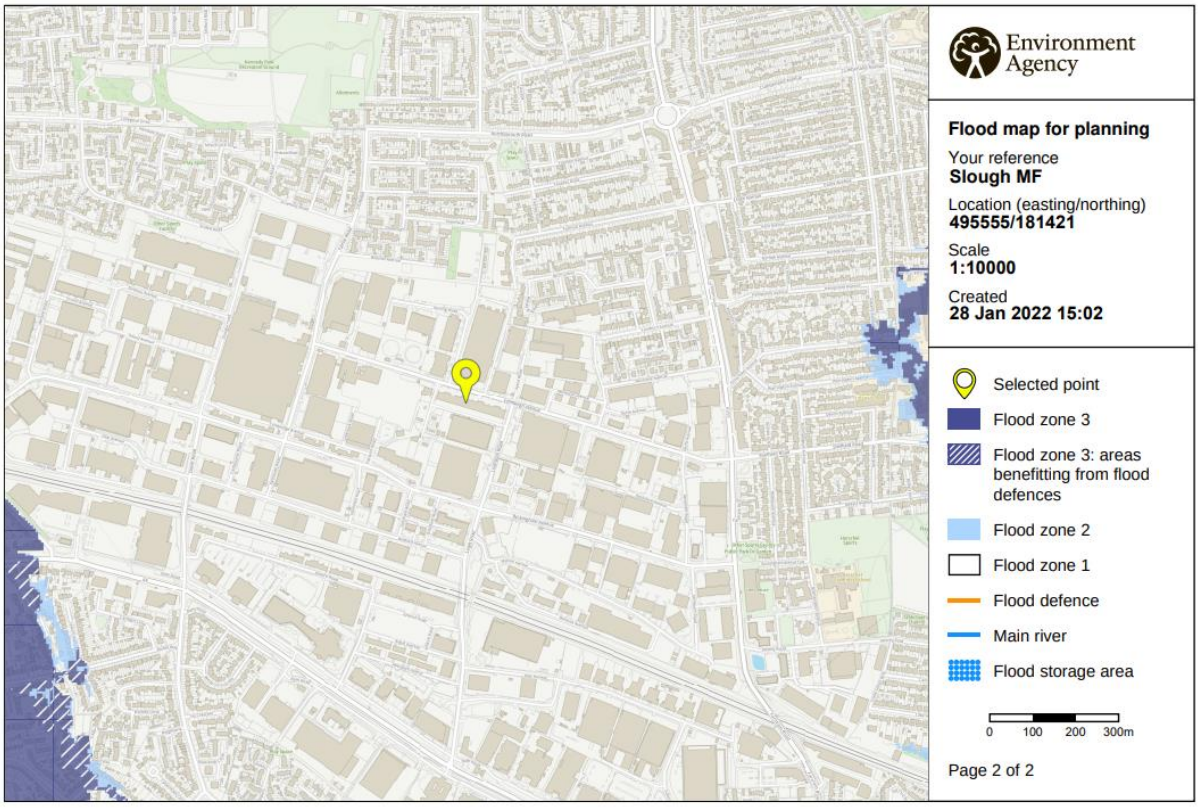


Figure 4-1 Environment Agency Flood Map for Planning for Slough Multifuel

4.2.1 Tidal Sources

The Site is not located in close proximity to the sea or any tidally influenced watercourse. Based on this information the risk of flooding from this source is not considered further as part of this assessment.

4.2.2 Fluvial Sources – Main River

The Site is not located near an EA main river. The nearest Main Rivers are Chalvey Brook, approximately 950m west of the Site, and Salt Hill Stream approximately 1.1km to the east of the Site.

4.2.3 Fluvial Sources – Ordinary Watercourses

The Site is not located in proximity to any Ordinary Watercourse. The nearest Ordinary Watercourse is Haymill Valley Stream approximately 1.15km west of the Site.

Given the Site is located in Flood Zone 1 and at some distance from any Main River and Ordinary Watercourse the risk of flooding from fluvial sources is considered to be low.

4.3 Surface Water (Overland Flow)

Surface water flooding is caused by overland flow that results from rainfall that fails to drain into the ground through infiltration, instead of travelling over the ground surface. This can be exacerbated where the permeability of the ground is low due to the type of soil (such as clayey soils) and geology or land use including urban developments with impermeable surfaces.

The Environment Agency Risk of Flooding from Surface Water (RoFSW) maps indicate areas at risk from surface water flooding when rainwater does not drain away through the normal drainage systems or soak into the ground, but instead lies on or flows over the ground. The RoFSW flood map for the Proposed Project can be viewed on the Environment Agency website. Risk from surface water flooding is defined in Table 4.1.

Table 4.1: Definition of risk from surface water flooding

Risk of flooding	Definition
Very Low	Each year, the area has a chance of flooding of less than 1 in 1000 (0.1%)
Low	Each year, the area has a chance of flooding of between 1 in 1000 (0.1%) and 1 in 100 (1%)
Medium	Each year, the area has a chance of flooding of between 1 in 100 (1%) and 1 in 30 (3.3%)
High	Each year, the area has a chance of flooding of greater than 1 in 30 (3.3%)

The RoFSW map shows that the majority of the Site is at very low risk of flooding from surface water, with the western and eastern areas of the Site at medium and high risk.

It is considered that these areas shown to be at risk are reflective of areas of low topography where water sits and pools during higher return period storm events.

There is no record of the Site flooding, however, as mentioned in Section 4.1, there have been several instances of surface water flooding on Edinburgh Avenue.

The risk of flooding from surface water sources is assessed as medium.

4.4 Artificial Waterbodies

Artificial flood sources include raised channels such as canals or storage features such as ponds and reservoirs. The Environment Agency Long-term Flood Risk maps indicate the Site is not located in an area that would flood should a reservoir failure occur.

There are no significant artificial water sources in proximity to the Site.

The risk of flooding to the Site from all artificial waterbodies is therefore considered to be low.

4.5 Groundwater Sources

Groundwater flooding can occur when groundwater levels exceed ground surface levels as a result of periods of sustained high rainfall. The underlying geology has a major influence on where this type of flooding takes place; it is most likely to occur in low-lying areas underlain by permeable rocks (aquifers) where the water table is more likely to be at shallow depth.

4.5.1 Geology and Hydrogeology

The 1:50,000 British Geological Survey (BGS) Map of Britain indicates that most of the Site is mapped on superficial deposits consisting of Langley Silt Member deposits (clay and silt). The bedrock geology mapped underlying the Site comprises of sedimentary rock from the Lambeth Group. Further information is presented in Section 2.5 – Geology and Hydrogeology.

4.5.2 Groundwater Levels

There are three publicly available boreholes located within the Site boundary:

- Reference SU98SE57: located close to Greenock Road and in the southern part of the Site;
- Reference SU98SE56: located close to the south-eastern perimeter of the Site; and
- Reference SU98SE53: located approximately centrally in the Site, south of Edinburgh Avenue.

The borehole records indicate groundwater presence between 4.1m and 4.7m below ground level (bgl).

WSP undertook intrusive site investigations at the Site in January 2012 and groundwater was encountered from 4.5m bgl through the underlying River Terrace Deposits from the top of the White Chalk. Stranding groundwater was found to be 4.6m bgl[18]

[18] WSP(2012) SSE Silo – Slough Heat and Power Intrusive Site Investigation and Geotechnical Assessment

It is unlikely groundwater will be encountered in excavations during construction works for the Consented Development with limited below ground works expected to take place, and no below grounds works at all in connection with the Proposed Project. However, should localised groundwater emergence occur it is considered this can easily be dealt with by the use of a small pump, and would not increase flood risk from groundwater sources to the area during or after the construction process.

4.5.3 Groundwater Flooding

Groundwater levels tend to get re-charged during the winter and high groundwater levels can cause flooding as the water table rises. This rise in water table levels can be very slow, dependent on rainfall patterns. There is no reference to groundwater flooding events in the SBC PFRA or SFRA for Slough Trading Estate where the Site is located. The SFRA also states that the Site is not located within an area that is susceptible to groundwater emergence.

Given the limited information on groundwater and potential for groundwater flooding in the area, the risk of flooding from groundwater sources is assessed as low risk.

4.6 Drainage and Sewerage Infrastructure

Flooding from drains, sewers and surface waters are normally interconnected. Insufficient or reduced drainage capacity within the sewer network can result in drainage capacity being exceeded causing extensive surface water flooding. Likewise, increased volumes of surface water can overload sewers and drains, causing the drainage network to backup and surcharge causing surface water flooding.

4.6.1 Existing Drainage Infrastructure

Initial drainage investigations undertaken in 2020[19] indicates that the surface and roof water systems serving the existing site drain via conventional methods utilising gullies, channels and rainwater pipes, conveying water to the existing sewers. Ultimately the existing site drainage system is noted to discharge either to local public surface sewer/culvert infrastructure (within surrounding public highways) or directly to groundwater via a series of soakaways which are present across the Site.

Details of the existing drainage infrastructure is presented as Appendix C, Site Wide Drainage Layout drawing

4.6.2 Flood Risk from Drainage Infrastructure

Thames Water is the sewerage undertaker that serves the SBC administrative area. As part of the SFRA, Thames Water provided records from their Floods Registers which are used to record flood incidents attributable to their sewer networks, whether that be from foul and / or surface water sewers. The historical mapping, included within the SFRA, shows that the Site is not located in an area that is known to flood from sewer networks.

The Drainage Strategy submitted and approved as part of the Consented Development planning application remains unchanged for the Proposed Project.

On the basis of the available information, the Site is considered to be at low risk of flooding from drainage and sewerage infrastructure.

[19] Doran Consulting (2020) Slough Multifuel CHP Facility Drainage Design Strategy

5. Climate Change

The Environment Agency published updated climate change guidance in July 2021[20]. The guidance indicates that climate change is likely to increase

- peak river flows;
- peak rainfall intensity;
- sea level rise; and
- wave height and offshore wind speed.

For the purpose of this assessment, sea level rise, wave height and offshore wind speed are not included as the Site is not considered to be at risk of flooding from tidal sources.

5.1 Peak River Flow Allowances

The Proposed Project lies within the Maidenhead and Sunbury Management Catchment. Table 5.1 shows the climate change allowances for the catchment.

Table 5.1: Peak River Flow Allowance for the Maidenhead and Sunbury Management Catchment

Allowance Category	Total potential change anticipated for '2020s' (2015 to 2039)	Total potential change anticipated for '2050s' (2040 to 2069)	Total potential change anticipated for '2080s' (2070 to 2115)
Upper End	32%	45%	81%
Higher Central	19%	25%	47%
Central	14%	17%	35%

5.1.1 Peak River Flow Allowances for Different Assessments

For FRAs, the "Flood Risk Vulnerability Classification" must be used to categorise the development in order to determine its compatibility within the Flood Zone. The National Policy Statement for Energy EN-1 designates the Proposed Project as 'Essential Infrastructure', as it is essential utility infrastructure that needs to remain operational in times of flood.

The vulnerability classification and flood zone designation should be used to decide which peak river flow allowances (allowance category) to use based on the lifetime of the development. The lifetime of the Consented Development with the Proposed Project is approximately 50 years.

Table 5.2 summarises the peak river flow allowances for the different flood risk vulnerability classifications for each flood zone.

[20] Environment Agency (2021) Flood risk assessments: climate change allowances. Available at: https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Table 5.2: Environment Agency Climate Change Allowances to apply based upon the Flood Zone and Development Land Use Vulnerability

	Water Compatible	Less Vulnerable	More Vulnerable	Highly Vulnerable	Essential Infrastructure
Flood Zone 1	CA	CA	CA	CA	CA
Flood Zone 2	CA	CA	CA	CA	HCA
Flood Zone 3a	CA	CA	CA	X	HCA
Flood Zone 3b	CA	X	X	X	HCA

CA = Central Allowance; HCA = Higher Central Allowance; X = Development not permitted

As the Site is located in Flood Zone 1 and is classified as Essential Infrastructure (NPPF), the central allowance is assessed.

5.2 Peak Rainfall Intensity Allowance

Increased rainfall affects river levels and land and urban drainage systems. Table 5.3 shows anticipated changes in extreme rainfall intensity in small and urban catchments. For FRAs and SFRAs, both the central and upper end allowances need to be assessed to understand the range of impacts.

Table 5.3. Peak Rainfall Intensity Allowance in small and urban catchments

Applies across all of England	Total potential change anticipated for 2010 to 2039	Total potential change anticipated for 2040 to 2059	Total potential change anticipated for 2060 to 2115
Upper End	10%	20%	40%
Central	5%	10%	20%

5.3 Climate Change Allowances for the Proposed Project

It is assumed that the lifetime of the development is 50 years; therefore, the peak climate change allowances for the lifetime of the Proposed Project should be assessed appropriately as shown in Table 5.4.

Table 5.4: Peak River Flow Allowances for the Proposed Project

Proposed Project: Slough Multifuel Extension Project	
River Basin District	Thames Valley

Proposed Project:
Slough Multifuel Extension Project

Management Catchment	Maidenhead and Sunbury
Flood Zone	Fluvial – Flood Zone 1
Flood Risk Vulnerability Classification	Essential Infrastructure
Lifetime of Development	50 (Yr 2073)
Fluvial Climate Change Allowance	2080s Central (35%)
Peak Rainfall Intensity Allowance	Upper End (40%)

6. Project Flood Risk Assessment

The NPPF requires site specific FRAs accompanying planning applications to assess the risk of all sources of flooding to and from the Proposed Project, and to demonstrate how these flood risks will be managed so that the development remains safe throughout its lifetime, taking climate change into account.

6.1 Fluvial Flooding

The Site is located in Flood Zone 1 and classed as essential infrastructure under the NPPF and NPS flood risk vulnerability classification.

Under the climate change scenario, water levels within the Chalvey Brook and Salt Hill Stream will increase and as a consequence, there is potential for flood extents along the watercourses to increase. Given the distance of these watercourses from the Site and comparing the current flood zone extents, as reported in Section 4.2.2, a 35% increase in peak flood flows is unlikely to impact the Proposed Project Site.

General flood resilience and resistant measures are included in the design of the Consented Development and will not change as a consequence of the Proposed Project.

It is considered that the risk of fluvial flooding over the lifetime of the Proposed Project remains low.

6.2 Surface Water Runoff Generation and Overland Flow

Climate change must be taken into account when considering surface water runoff generated by development sites. This is usually represented by increasing the peak rainfall intensities (Table 5.3). An increase in rainfall intensity will result in an increase in runoff rates and volumes from the development, though the impact of this is expected to be minimal due to the scale of the development and existing infrastructure.

As the rainfall intensities and storm events are likely to increase under the climate change scenario, the risk of flooding from surface water, which is currently considered to be medium, is expected to increase at the Site unless mitigation measures are taken. The drainage layout plan for the Consented Development gives an indication that the existing drainage infrastructure will be adequate for the Proposed Project. No further mitigation measures are required. Further information on the drainage infrastructure at the Site is presented in Appendix C.

In addition, general flood resilience and resistant measures, as mentioned in Section 6.1, would be sufficient to mitigate against the residual risk of an exceptional storm event, should it occur.

6.3 Artificial Waterbodies

There are no canals, reservoirs, lakes or ponds nearby to the Site, therefore the risk of flooding from artificial waterbodies is considered to be ‘very low’.

6.4 Groundwater Flooding

The predicted increase in the wetness of winters and the intensity of storm events could impact groundwater level fluctuations across the Site, and possibly increase the level of the water table. As the likelihood of groundwater emergence under the climate

change scenario is likely to increase, the potential for groundwater flooding to impact the Proposed Project may also increase.

Given the lack of data with regards groundwater levels at the Site, the Site is considered to remain at medium risk of flooding from groundwater. The presence of hardstanding ground associated with the Site creates an impermeable barrier at the surface. This prevents groundwater emergence across the Site. Therefore, the risk of groundwater flooding is considered to remain a low risk throughout the lifetime of the development.

6.5 Flooding from Drainage Infrastructure

It is difficult to precisely predict the impact of climate change on flooding from drainage infrastructure. However, with the projected increases in rainfall intensity, a greater amount of surface water runoff will be generated on site. In order to account for this increase, in accordance with current best practice, the Consented Development drainage system is designed to ensure that out of sewer flooding does not occur in any part of the site during a 1 in 30-year storm event. Due to the operating nature of the Site, it is also proposed to ensure minimal out of sewer flooding in a 1 in 100 storm event. Further details should be provided in the drainage strategy document recommended. The Consented Development Drainage Infrastructure at the facility is outlined in Appendix C.

The risk of flooding from drainage infrastructure will remain low over the lifetime of the development.

7. Off-Site Impacts and Residual Risk

7.1 Off-Site Impacts

The drainage strategy[21] in place for the Consented Development, which will not change as a result of the Proposed Project, is constructed to include surface water attenuation and restrict surface water run-off to the surrounding area, therefore the Consented Development and the Proposed Project will not increase flood risk elsewhere.

7.2 Residual Risk

Failure, blockage or exceedance of the drainage systems (including drains and any attenuation features) are a
potential residual risk to the Site and the surrounding area. Regular inspection and maintenance will be undertaken to prevent blockages of drainage infrastructure.

Drainage infrastructure will be regularly inspected and maintained to certify their design standard is not compromised over the lifetime of the development.

There also remains the risk of surface water flooding in the event of a storm in excess of the ‘design storm’. To
manage the risk from exceedance flows, the drainage design will follow appropriate guidance (i.e. CIRIA C63527)
to provide flow paths such that any overland flow is directed away from impacting any surrounding development.

[21] Drainage Design Strategy (2020) Doran Consulting

8. Conclusions

AECOM has prepared this FRA on behalf of SSE Slough Multifuel Limited in accordance with the relevant National Policy Statements for Energy, and the NPPF and associated PPG, to support a development consent order application for the Proposed Project located in the Slough Trading Estate.

The following conclusions can be made regarding flood risk to the Proposed Project Site and to off-site areas as a result of the Proposed Project:

- The FRA has considered all potential sources of flooding to the Proposed Project Site, including tidal, fluvial, groundwater, land drainage, overland flow, artificial sources, and sewer drainage arrangements. Climate change has also been considered, which is expected to increase the peak rainfall intensity by up to 40% and increase peak river flows by up to 35% over the lifetime of the development;
- The Environment Agency FMfP shows the Site is located in Flood Zone 1 and as such is at low risk of flooding;
- The Proposed Project is not located near a tidally influenced watercourse or in a coastal location therefore flood risk from tidal sources is not considered in the assessment.
- The risk of flooding from fluvial sources, both Main River and Ordinary Watercourses, is considered to be low over the lifetime of the Proposed Project due to its distance from such sources;
- The National Policy Statement for Energy and PPG consider energy related development to be classed as ‘essential infrastructure’ therefore the Proposed Project is considered appropriate in the planning context for development in Flood Zone 1 therefore, the Sequential Test is considered to be passed and the Exception Test is not required;
- The Environment Agency RoFSW maps indicate the Site is generally at medium risk of flooding from surface water ;
- The risk of flooding from artificial sources and drainage infrastructure is considered to be low;
- Given the limited data with regards groundwater levels at the Proposed Project Site, the assessment of flooding from groundwater sources is considered to be a medium risk;
- The Drainage Strategy submitted and approved in support of the Consented Development application remains applicable to the Proposed Project.; and
- It is considered that there will be no off-site impacts as a result of the Proposed Project in relation to flood risk.

Based on the findings to date, AECOM considers that the flood risk from all sources, to and from the Proposed Project will be mitigated, through the measures already in place or to be put in place as part of the Consented Development, to a level which is low and acceptable. No additional mitigation beyond what is already secured in connection with the Consented Development is required as a result of the Proposed Project.

Appendix A Statutory Consultation Responses

www.slough.gov.uk
Slough Borough Council

Taking pride in our communities and town

Date 8th May 2013

Department: Highways Department
Contact Name: Steve Brocklebank
Contact No: [redacted]
Fax:
Email: [redacted]

Our Ref:
Your Ref: SHP Multifuel/MALT0001/FD

Ms Francesca Dee
URS Infrastructure & Environment UK Limited
Bridgewater House, Whitworth Street
Manchester
M1 6LT

Dear Ms Dee

Re: Proposed development at Slough Trading Estate, 342 Edinburgh Avenue, Slough, SL1 4TU (National Grid reference 49530, 1851450)

Thank you for your request of 18th April 2013 for information for a FRA on the above site

Our responses to your individual questions are given below.

- Details of any known surface water flooding problems in the area and confirmation of any designated critical drainage areas (CDAs);

I attach figures for surface water flooding extents for a 1 in 30 year and 1 in 100 year +CC. These are have been taken from the Surface Water Management Plan which was undertaken for SBC in June 2012. It should be noted that the surface water maps provide a general outline of surface water flooding across a large area and they are not intended for detailed information at individual property or site level.

- Information on flooding associated with the surcharging of the sewer network;

Edinburgh Ave culvert runs through the power station and is heavily surcharged. The Buckingham Ave foul system was often surcharged even in dry weather and has a number of foul to foul overflows before connecting to a relief outfall sewer. We know the foul system surcharges nearly to ground level with SW overflows in storm.

- Information on groundwater flooding;

There have been no problems with groundwater but the geology is very inconsistent and contamination is always a risk.

- Any requirements the Council may have on surface water management at the proposed development.

We have no information on private water supplies in the vicinity of the site.

The FRA should take into account the requirements of the Simplified Planning Zone and should be aware that we have some outline guidance on SUDS which I attach.

At present we do not charge for providing this information but we are currently reviewing our policy on charging fro this type of information and we may charge in the future.

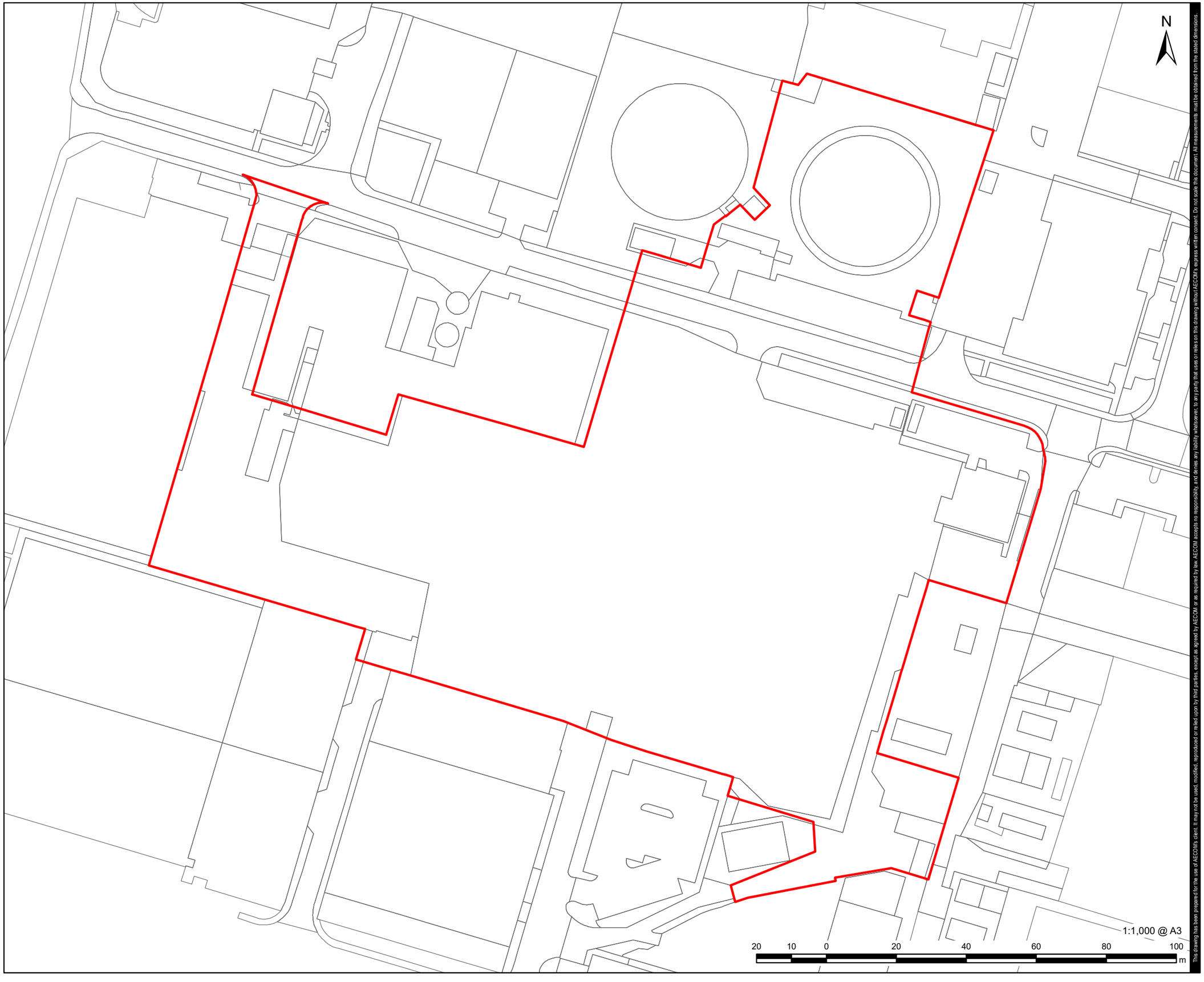
Yours sincerely,

Steve Brocklebank
Interim Team Leader
Highways Development

Appendix B Site Boundary Plan

Revision: 1 Drawn: BS Checked: LM Approved: POC Date: 2022-03-22

Filename: \\na.aecomnet.com\lfs\EMEA\Dublin-IEDBL2\Legacy\DU-MAN-002\Data\CoDublin-Jobs\GIS\60662169_Slough_Multifuel\GIS\02_Maps\PEI Report\Figure 2.1 Proposed Project Location_20220321.mxd



AECOM

PROJECT

SLOUGH MULTIFUEL PROJECT

CLIENT

SSE Slough Multifuel

CONSULTANT

3rd Floor, Portwall Place
Portwall Lane
Bristol
BS1 6NA
aecom.com

LEGEND

Proposed Project Site Boundary

NOTES

ISSUE PURPOSE

FOR INFORMATION

PROJECT NUMBER

60662168

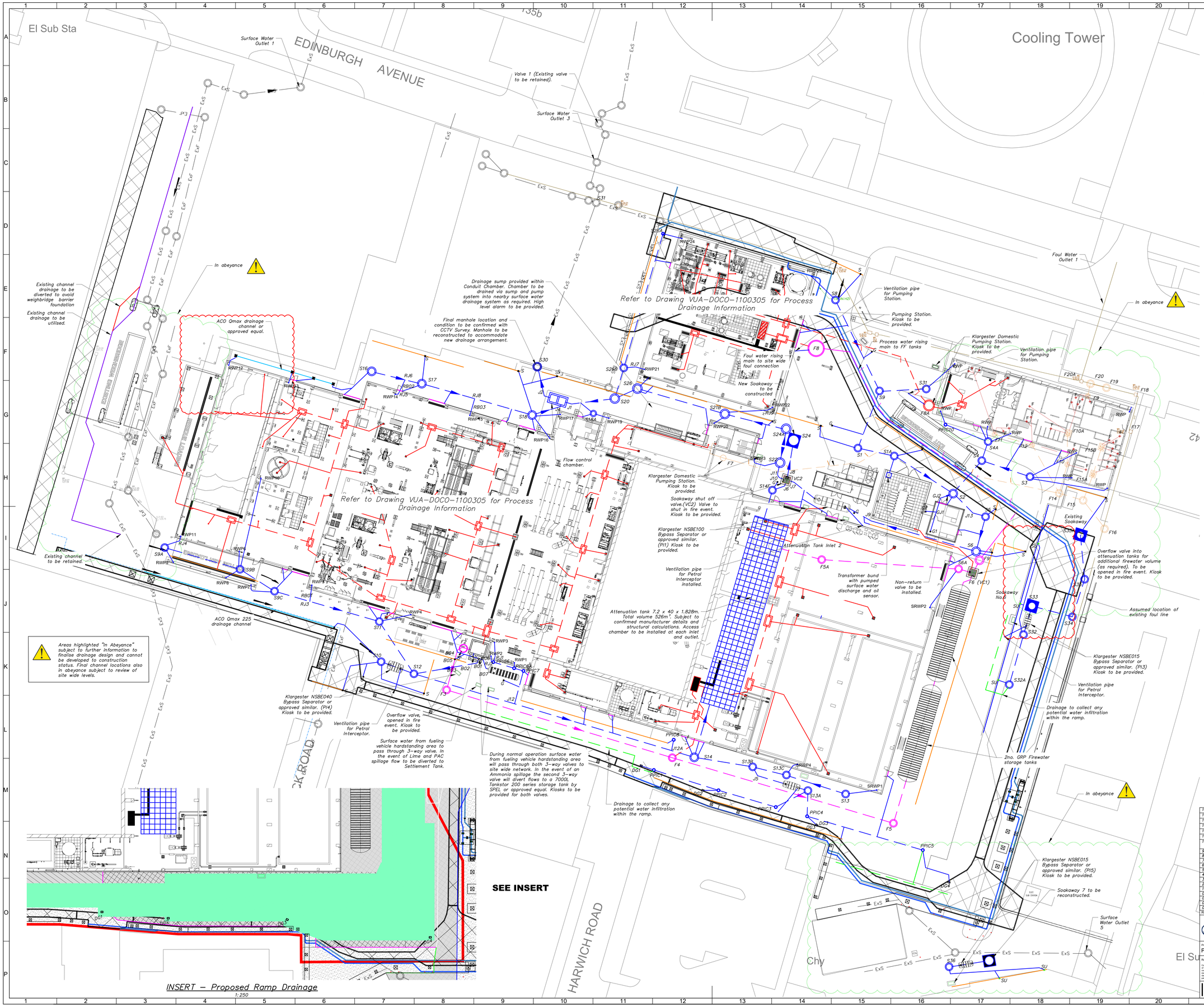
FIGURE TITLE

Proposed Project Site Boundary

FIGURE NUMBER

Figure 2.1

Appendix C Drainage Layout Plan



Legend

- Existing Surface Water Sewer
- Existing Foul Sewer
- Surface Water Sewer
- Perforated Pipe
- Foul Sewer
- Foul Water Pumping Main
- Firewater Drainage
- Fire Water Pumping Main
- Process Drainage
- Process Pumping Main
- Soakaway Chamber
- Marshalls Bircо external drainage channel
- Marshalls Bircо threshold drainage channel
- ACO Qmax 225 drainage Channel
- ACO KerbDrain (or equal approved)
- Existing Channel
- Oil Interceptor
- Cellular Attenuation
- Pump sump
- Gully
- Drainage channel sump unit
- BIGT — Back Inlet Gully Trap
- RWP — Rain Water Pipe
- Internal Foul Water Connection
- Firewater storage tank
- Cable Diversion Route

Note: Refer to drawing No. VUD-DOCO-11000350 & 355 for Manhole schedules. For RWP details refer to drawing No. VUD-DOCO-11000314 & 310.

Notes:

1. This drawing should be read in conjunction with all relevant Architectural and Engineering drawings.
2. All gullies to be trapped. Road gully grills to be heavy duty ductile iron (Load Class D400).
3. Refer to Architect's drawings for exact locations of all rainwater downpipes.
4. Refer to relevant Architect's and M&E Engineering drawings for exact locations of builder's upstands/ SVPs etc.
5. Contractor to ensure that all conditions surface water and foul drainage discharges are met. All discharge arrangements to be confirmed.
6. All pipework with diameter of 300mm or less to be uPVC pipes unless otherwise stated. All pipes with diameter greater than 300mm to be class H concrete or HDPE twin wall.
7. All pipes with cover exceeding 1.2m in trafficked areas and 0.9m in non-trafficked areas to have class S bedding. All pipes with cover less than 1.2m in trafficked areas and 0.9m in non-trafficked areas to have class Z bedding.
8. Contractor to confirm the location and level of any existing obstructions/structures etc., uncovered during the works.
9. Contractor to confirm the location and level of any existing sewers prior to the commencement of any works. Any discrepancies are to be notified to the engineer immediately.
10. Contractor to confirm the location of all existing services, buried and overhead, prior to the commencement of the works.
11. All door thresholds to be Marshalls Bircо 100 or approved similar. All external drainage channels to be Marshalls Bircо 200 or approved similar. All required fixtures and fittings to be specified by drainage channel manufacturer. D400 gratings to be used in vehicle areas.
12. All drainage to be constructed in accordance with, 'WRc Sewers for Adoption'
13. All setting out shall be in accordance with available Architecture drawings.This drawing shall not be used for setting out purposes.
14. All interceptors to be constructed in strict accordance with manufacturer's guidelines. All vents to be provided in agreed locations. All interceptors to be fitted with high level oil and silt alarms.
15. All works to comply with current British Standards, Codes of Practice, and Building Regulations. The Contractor shall verify all information on site and report any discrepancies immediately to the Architect/Engineer.

Rev.	Modifications	Drawn	Checked	Approved
16.0	Drainage layout updated – 04.02.22	AMcG	AC	PGK
15.0	Drainage layout updated – 03.02.22	AMcG	AC	PGK
14.0	Drainage layout updated – 16.02.22	AMcG	AC	PGK
13.0	Drainage layout updated – 11.01.22	AMcG	AC	PGK
12.0	Land drainage added – 25.11.21	AMcG	AC	PGK
11.0	Gully added. Channels updated – 04.11.21	AMcG	AC	PGK
10.0	Channel at ash silo amended to tie into process drainage. PPIC 1 location updated. Perforated pipework added underneath ramp. – 14.10.21	AMcG	AC	PGK
9.0	General amendments to layout – Channels and gullies added – 06.10.21	AMcG	AC	PGK
8.0	Vents added for petrol interceptors and Pumping Stations – 24.09.21	AMcG	AC	PGK
7.0	Side wiinge updated – 16.09.21	AMcG	AC	PGK
6.0	Firewater tank size updated, general updates – 11.08.21	AMcG	AC	PGK
5.0	Side wide drainage updated – 06.08.21	AMcG	AC	PGK
4.0	Side wide drainage updated – 09.07.21	AMcG	PMcG	PGK
3.0	Side wide drainage updated – 30.06.21	AMcG	PMcG	PGK
2.0	Construction Issue – 17.06.21	AMcG	PMcG	PGK
1.0	Site wide drainage updated – 07.05.21	AMcG	PMcG	PGK
0.3	Updated attenuated location – 03.12.20	AMcG	PMcG	PGK
0.2	Updated attenuated tank sizing – 26.11.20	AMcG	PMcG	PGK
0.1	Updated with comments – 23.10.20	AMcG	PMcG	PGK
0.0	First issue – 01.10.20	AMcG	PMcG	PGK

sse Thermal | CIP Copenhagen Infrastructure Partners

CONSTRUCTION DRAWING

Project-No. P-3258	Project-Name. Slough Multifuel	Description Drainage				
Reservation of rights cf ISO 16016	A/C 19AAC1	Title Site Wide Drainage Layout				
Copying of this document and giving it to others and the use or communication of the contents thereof are forbidden, without expressed authority. Offenders are liable to the payment of damages. This applies in particular to the case of the grant of a patent or the registration of a utility model or design.	Weight -					
	Scale 1:250	Replaced by:		Replaced for:		
Hitachi Zosen INOVA	Status C	Sheet	Doc Type VUA	Supplier DOCO	Drawing-No. 11000301	Revision 16.0
	Size A0