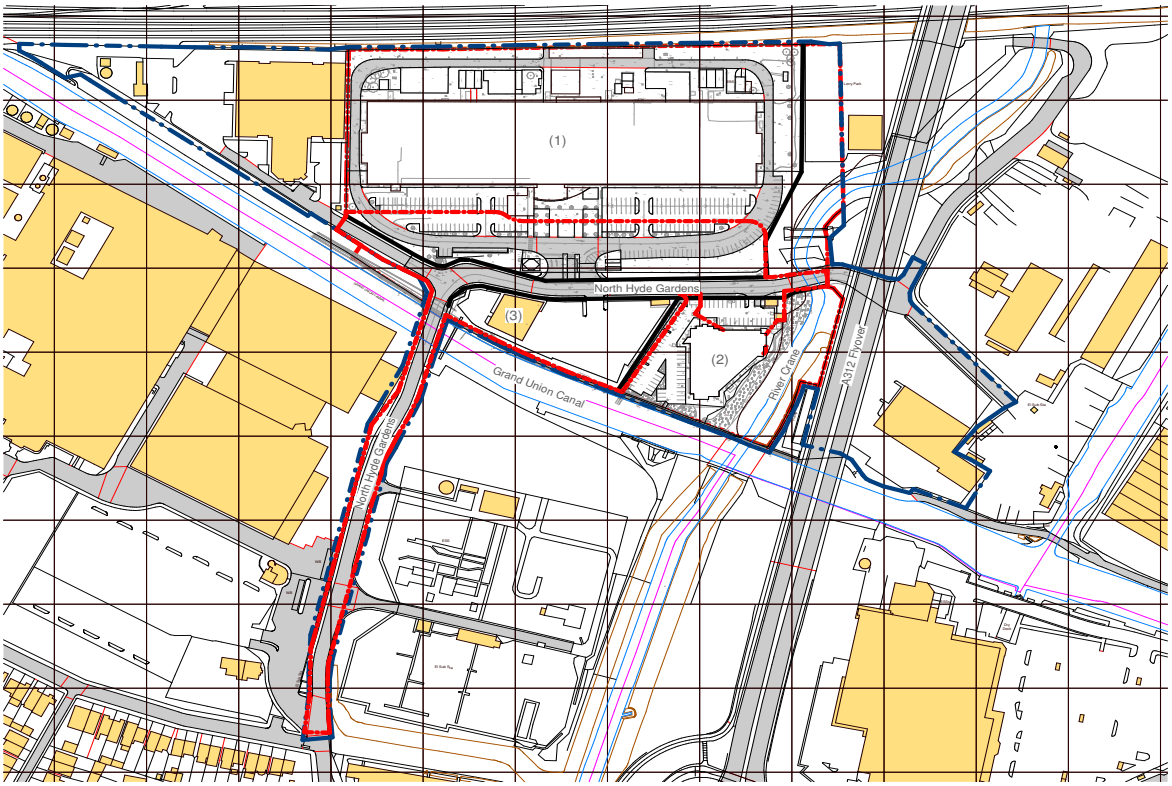

Project Union – 7511/APP/2022/1007 S96A(2)

HDR Technical Notes

Bulls Bridge Industrial Estate, Hayes, UB3 4QQ

Date:	April 2023	**Issue:**	02
Reference:	HPF-0571-ZZ-ZZ-RP-MEP-00001	**Status:**	Issue

Prepared by:	Gabiela Krebs	**Date:**	17/04/2023
Edited by:	Ulrich Groenwald	**Date:**	18/04/2023
Authorised by:	John Foreman	**Date:**	19/04/2023
Issuing office:	Croydon		

Table of Contents

1.0 Summary

HDR Review of Technical Matters	Impact on Application Ref: 7511/APP/2022/1007
Air Quality	No change
BREEAM	No change
Drainage	No change
Energy	No change
Noise	No change
Sustainability	Improved*
Transport	Improved**

* Predicted CO2 savings have improved marginally from 43.34% (March 2022) to 44.8% (April 2023).

** Routing and length of the proposed footpath was adjusted to avoid existing statutory utilities. This revision led to an improved route and reduced length of the towpath, so easing pedestrian comfort. This in turn meant that the entrance to the visitors' reception center (VRC2) could be moved, leading to a significant improvement of pedestrian safety from the gate to the VRC2 entrance. In addition, there will be a marginal increase in soft landscaping but also a more maintainable and accessible piece of land.

2.0 Air Quality

Air Quality Technical Note for EC3

Union Park

February 2023

www.phlorum.com

Air Quality Technical Note for EC3

Union Park

February 2023

HDR Consulting Ltd

240 Blackfriars Road
London
SE1 8NW

Document Control:

Project No.	Project
9167	Union Park

Project No.	Revision	Written By:	Checked by:	Authorised by:	Date of issue
9167	V1	R. Boakes	J. Ferguson-Moore	J. Ferguson-Moore	23.02.2023

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Phlorum Limited

Southern Office: Unit 12, Hunns Mere Way, Woodingdean, Brighton, East Sussex, BN2 6AH

T: 01273 307 167 E: info@phlorum.com W: www.phlorum.com

Technical Note for EC3

Introduction

This technical note has been produced by Phlorum Limited to support the Stage 3 design for energy centres and visitor centres associated with a permitted data centre (75111/APP/2020/1955) at Bulls Bridge Industrial Estate, Hayes.

The need for this technical note has arisen due to proposed minor changes to the locations of diesel generator exhaust flues at Energy Centre 3 (EC3). As shown in NWA's Drawing '*NWA-0473-DR-ZZ-M3-A-03005P – EC3 Floor Plans (Rev: P02)*, some of the diesel generators have been reorientated, thus requiring some exhaust flues to be shifted from the locations assessed within the 2022 slot-in planning application (NWA's Drawing *'NWA-0571-EC3-ZZ-DR-A-03-005P – EC3 Floor Plans')*. Extracts from the two drawings showing the changes in orientation are appended to this technical note.

The changes in diesel generator exhaust flue locations have the potential (albeit unlikely) to alter the results presented previously by Phlorum for the associated slot-in application (75111/APP/2022/1007). Phlorum had previously concluded that the site's operations would have an insignificant effect on local air quality.

For robustness, Phlorum have carried out detailed pollutant dispersion modelling to identify the magnitude of changes caused by the relocated flues. This can provide confidence that the proposed alterations will have no material influence on the conclusions of insignificance, previously drawn.

This technical note should be read in conjunction with the associated Air Quality Assessment (AQA) report (9167 (AQ) v10 - HPF-0571-ZZ-ZZ-RP-MEP-00001), which was produced by Phlorum for the 2022 slot-in application and original generator arrangement.

Methodological Overview

The modelling methodology applied for this assessment is identical to that approved by the London Borough of Hillingdon (LBH) for the associated 2022 slot-in application. The only difference between the two pollutant dispersion models is the locations of the proposed stacks; the differences of which are shown in the appended drawings.

The results of this assessment are compared directly with the Emergency Operation results of the 2022 slot-in application at the same modelled receptor locations, to identify the magnitude of changes and whether these changes cause significant effects.

This technical note compares results for nitrogen dioxide (NO_2) concentrations only, as the generators caused the greatest baseline changes to this pollutant in the previous assessment.

Results

The modelled results are displayed in Tables 1 and 2 overleaf. Table 1 compares the long-term air quality impacts for NO_2 and Table 2 compares the short-term impacts for NO_2.

Table 1: Comparison of predicted annual mean NO_2 concentrations following the design changes at EC3

Receptor Point	Receptor Location	Change in Annual Mean NO_2 Concentration					
		Results from Previous EC3 Design		Results from New EC3 Design		Comparison	
		Former PC ($\mu g.m^{-3}$)	Former Impact (IAQM significance)	New PC ($\mu g.m^{-3}$)	New Impact (IAQM significance)	Change in PC ($\mu g.m^{-3}$)	Change in Impact (IAQM significance)
R3	Proposed Residential Unit: Nestle Site	0.13	Negligible	0.13	Negligible	0.00	No Change
R4	Proposed Residential Unit: Nestle Site	0.12	Negligible	0.20	Negligible	0.08	No Change
R5	Guru Nanak School	0.06	Negligible	0.06	Negligible	0.00	No Change
R11	Residential Dwelling – Copperdale Rd	0.11	Negligible	0.11	Negligible	0.00	No Change
R12	Residential Dwelling – Chalfont Rd	0.06	Negligible	0.06	Negligible	0.00	No Change
R13	Proposed Commercial Unit: Nestle Site	0.28	Negligible	0.28	Negligible	0.00	No Change
R14	Residential Dwelling – Nestle Avenue	0.22	Negligible	0.22	Negligible	0.00	No Change
R15	Residential Dwelling – Nestle Avenue	0.13	Negligible	0.13	Negligible	0.00	No Change
R16	Residential Dwelling – Brent Road	0.12	Negligible	0.12	Negligible	0.00	No Change
R17	Residential Dwelling – Brent Road	0.09	Negligible	0.09	Negligible	0.00	No Change
R18	Proposed Residential Unit: Nestle Site	0.18	Negligible	0.20	Negligible	0.02	No Change

Note: "PC" = Process Contribution. Several receptors (e.g. R1) are not included in this table, as the annual mean does not apply at those specific receptors.

As shown in Table 1, the newly proposed locations of the generators at EC3 will have no material influence on the scheme's overall annual air quality impacts.

The air quality assessment for the slot-in application demonstrated that all highly sensitive locations would experience a negligible change in annual mean NO_2 concentrations, with respect to the relevant EPUK & IAQM impact criteria[1]. This is insignificant.

Likewise, the newly proposed Stage 3 design also predicts negligible impacts at all relevant receptor locations. All impacts are once again insignificant.

The largest change in annual mean NO_2 concentrations as a result of the proposed EC3 alterations was predicted at R4 to the west; a future residential unit at the former Nestle Site. This is to be expected, as the proposals are to relocate several exhaust flues further north and west. The NO_2 process contribution (PC) of 0.20 $\mu g.m^{-3}$ is anticipated to increase the predicted environmental concentration (PEC) to a total of 35.13 $\mu g.m^{-3}$, which is below the annual mean UK Air Quality Standard by more than 12%.

All concentrations were predicted to remain below the relevant Air Quality Standard for annual mean NO_2.

[1] EPUK & IAQM (2017). Land-Use Planning & Development Control: Planning For Air Quality.

Table 2: Comparison of predicted hourly mean NO_2 concentrations following the design changes at EC3

Receptor Point	Receptor Location	Change in Hourly Mean NO_2 Concentration (using the 98.93rd Percentile)					
		Results from Previous EC3 Design		Results from New EC3 Design		Comparison	
		Former PC ($\mu g.m^{-3}$)	Former Impact (EA Significance)	New PC ($\mu g.m^{-3}$)	New Impact (EA Significance)	Change in PC ($\mu g.m^{-3}$)	Change in Impact (EA Significance)
R1	Proposed Commercial Unit: Nestle Site	50.2	Not Significant	50.2	Not Significant	0.0	No Change
R2	Proposed Commercial Unit: Nestle Site	14.4	Not Significant	14.9	Not Significant	0.5	No Change
R3	Proposed Residential Unit: Nestle Site	11.1	Not Significant	12.8	Not Significant	1.7	No Change
R4	Proposed Residential Unit: Nestle Site	9.2	Not Significant	11.1	Not Significant	1.9	No Change
R5	Guru Nanak School	1.9	Not Significant	2.1	Not Significant	0.2	No Change
R6	Commercial Unit	16.4	Not Significant	17.4	Not Significant	1.0	No Change
R7	Hillingdon Mosque	13.1	Not Significant	14.3	Not Significant	1.2	No Change
R8	Commercial Unit – Tarmac Site	13.1	Not Significant	13.4	Not Significant	0.3	No Change
R9	Commercial Unit	39.7	Not Significant	39.7	Not Significant	0.0	No Change
R10	Commercial Unit	18.7	Not Significant	18.7	Not Significant	0.0	No Change
R11	Residential Dwelling – Copperdale Rd	6.5	Not Significant	6.7	Not Significant	0.2	No Change
R12	Residential Dwelling – Chalfont Rd	4.8	Not Significant	5.0	Not Significant	0.2	No Change

Receptor Point	Receptor Location	Change in Hourly Mean NO_2 Concentration (using the 98.93rd Percentile)					
		Results from Previous EC3 Design		Results from New EC3 Design		Comparison	
		Former PC ($\mu g.m^{-3}$)	Former Impact (EA Significance)	New PC ($\mu g.m^{-3}$)	New Impact (EA Significance)	Change in PC ($\mu g.m^{-3}$)	Change in Impact (EA Significance)
R13	Proposed Commercial Unit: Nestle Site	14.2	Not Significant	14.3	Not Significant	0.1	No Change
R14	Residential Dwelling – Nestle Avenue	10.9	Not Significant	10.9	Not Significant	0.0	No Change
R15	Residential Dwelling – Nestle Avenue	7.5	Not Significant	8.9	Not Significant	1.4	No Change
R16	Residential Dwelling – Brent Road	3.7	Not Significant	3.7	Not Significant	0.0	No Change
R17	Residential Dwelling – Brent Road	4.6	Not Significant	4.6	Not Significant	0.0	No Change
R18	Proposed Residential Unit: Nestle Site	12.1	Not Significant	14.3	Not Significant	2.2	No Change
R19	Proposed Development – Reception	53.1	Not Significant	53.1	Not Significant	0.0	No Change

Note: "PC" = Process Contribution. The 98.93rd percentile concentration was obtained (as was done for the slot-in application) to predict the 19th highest hourly concentration in a year from the scheme, whilst accounting for the limited operating hours of the generators.

As shown in Table 2, the newly proposed locations of the generators at EC3 will have no material influence on the scheme's overall short-term air quality impacts.

The air quality assessment for the slot-in application demonstrated that all modelled receptor locations would experience an insignificant change in hourly mean NO_2, with respect to the relevant EA significance criteria[2].

Likewise, the newly proposed Stage 3 design also predicts insignificant changes at all relevant receptor locations.

The largest change in hourly mean NO_2 concentrations as a result of the proposed EC3 alterations was predicted at R18 to the west; a future residential unit at the former Nestle Site. This is to be expected, as the proposals are to relocate several exhaust flues further north and west. The NO_2 hourly process contribution (PC) of 14.3 $\mu g.m^{-3}$ is anticipated to increase the predicted environmental concentration (PEC) to a total of 84.3 $\mu g.m^{-3}$, which is still well below the 200 $\mu g.m^{-3}$ hourly mean UK Air Quality Standard.

All concentrations were predicted to remain below the relevant hourly mean Air Quality Standard.

Conclusions

This technical note has been produced to identify the magnitude of air quality changes as a consequence of the proposed alterations to Energy Centre 3 (the relocation of generators), and to identify whether these changes are material, potentially resulting in significant air quality effects.

Results have clearly demonstrated that the relocated exhaust flues will have no material change to the pollutant concentrations predicted previously for the 2022 slot-in application.

As such, it is reasonable to state that the original conclusions of insignificance still apply. The proposed design changes to EC3 are predicted to have no significant impact on air quality.

[2] Defra (2016) Air emissions risk assessment for your environmental permit. Available at: https://www.gov.uk/guidance/air-emissions-riskassessment-for-your-environmental-permit.

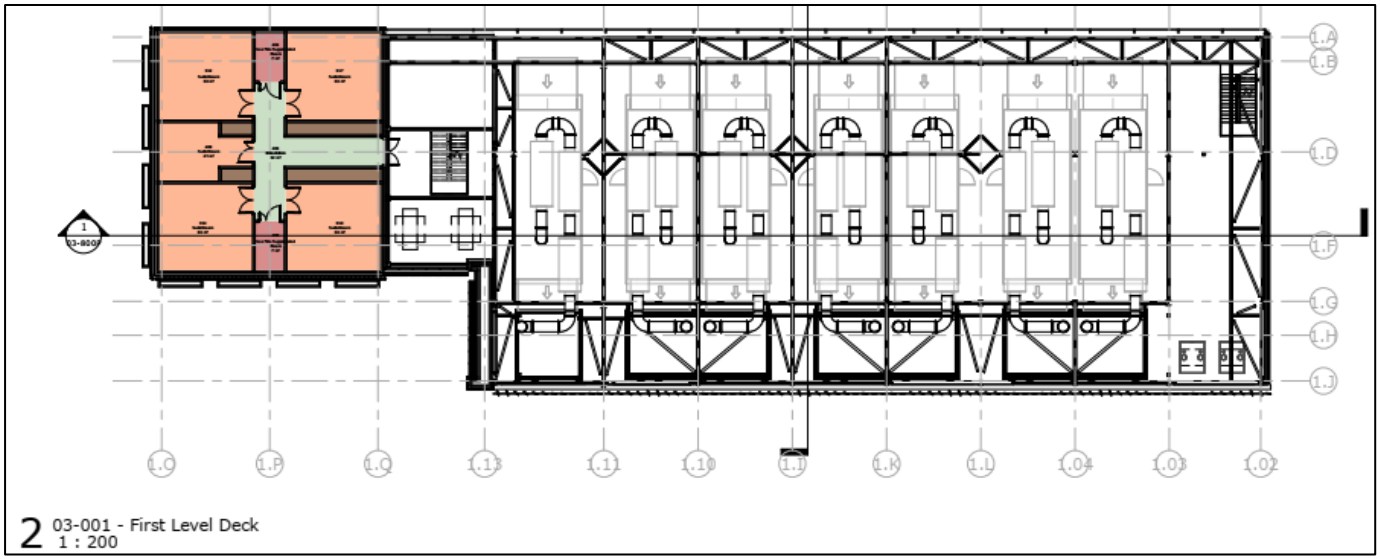

Figure: Old Generator layout at Energy Centre 3 for 2022 Slot-In Application – '*NWA-0571-EC3-ZZ-DR-A-03-005P – EC3 Floor Plans'*

Figure: New Generator layout at Energy Centre 3 for Stage 3 Design – '*NWA-0473-DR-ZZ-M3-A-03005P – EC3 Floor Plans (Rev: P02)*

3.0 BREEAM

Refer to the Sustainability Statement for BREEAM.

4.0 Drainage

Project:	ARK Union Park	Date:	05/04/2023
Reference:	75111/APP/2022/1007	Prepared By:	UG
Status:	Information	Issue:	1

Design Note: Application Ref: 75111/APP/2022/1007 - S96A - DRAINAGE

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1. HDR Assessment

The proposed amendments as described within the S96A application under planning reference 75111/APP/2022/1007, has no impact on the current consented scheme. The drainage system will remain as a gravity system with the required attenuation and pollution prevention measures. Both the foul and water gravity sewers will retain the on-site drainage routes with outfalls to the Thames Water Public sewer and the River Crane respectively.

5.0 Energy

Refer to the Sustainability Statement for Energy.

6.0 Noise

London | 020 7859 4530 | hello@auricl.com
Reading | 0118 207 7324 | www.auricl.com

auricl
acoustic consulting

John Foreman
HDR
4th Floor, Knollys House
17 Addiscombe Road
Croydon
CRO 6SR

2 April 2023

Dear John

Project Union, S96(2) Submission – Acoustic Review

We write in reference to the proposed Non-Material Amendment under Section 96A of the Town and Country Planning Act 1990.

The proposed alterations to the scheme are understood to involve the following:

- Re-alignment of canal footpath albeit the portion of the site where this is to be located will remain the same. This will trigger incidental changes to landscaping and the car parking arrangement (but with no change to the quantum of car parking)
- Alterations to Energy Centre 2 consisting of the addition of external stairs (which will be screened), the reversal of the direction that heat rejection stacks are pointing, and the creation of additional apertures at ground floor level. This will not result in any changes to the building's footprint, internal floorspace, or height
- Alterations to Energy Centre 3 relating to the green wall arrangement albeit it is understood that there will be no net loss of green walling across the building.

Our previous noise report (attached) details our assessment of the proposals to date.

As a result of the proposed alterations detailed above, it is understood that it will be necessary to reverse the orientation of some of the exhaust chutes and engine exhausts, which will result in the relocation of these noise sources approximately 18m north of their previously-proposed locations.

These proposals are not expected to result in an adverse noise impact, in comparison to our previous assessment.

7.0 Sustainability

Technical Note

S96a (2) Amendment to March 2022 application

Union Park, London

London Blackfriars

April 12, 2023

Date:	April 2023	Issue:	00
Reference:	10276084	Status:	Issue

Prepared By:	Gabriela Krebs	Date:	5th April 2023
Edited By:	Luisa Dolce	Date:	5th April 2023
Authorised By:	Tim Pegg	Date:	12th April 2023

Document Control

Issue	Date	Status	HDR Author	HDR Approval	Notes
00	05/04/2023_GK	Issue	05/04/2023_GK / LD	12/04/2023_TP	

Contents

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1 Purpose of S96a (2) addendum

The purpose of this addendum is to confirm that the changes included within the S96a (2) application have been assessed with respect to the approved application (March 2022) and do not negatively impact affect the energy and sustainability issues mentioned herein.

The proposed minor alterations are as follows

- Alterations to EC2 – the addition of external stairs (screened), the reversal of the heat rejection stacks & the creation of additional GF apertures.
- VRC1 reduced from 2 floors to 1 floor.
- Changes to the towpath and VRC car parking arrangement,
- Alterations to EC3 relating to the green wall arrangement.

This report provides an addendum to the Energy Statement (HDR, Iss 2, March 2022) and Sustainability statement (HDR, Iss01, March 2022), which outlined the energy and sustainability strategies for the Union Park data centre campus. These documents should be read in conjunction with this S96a (2) addendum.

2 Overview of Union Park

The project consists of a new build data centre campus, with the redline boundary of this application including the non data centre buildings, namely 3 no. energy centres (EC1, EC2 and EC3) and 2 no. visitor reception centres (VRC1 and VRC2).

The development is located on the Bulls Bridge Industrial Estate in Hayes, West London and is adjacent to the Grand Union Canal and the main railway line into London Paddington.

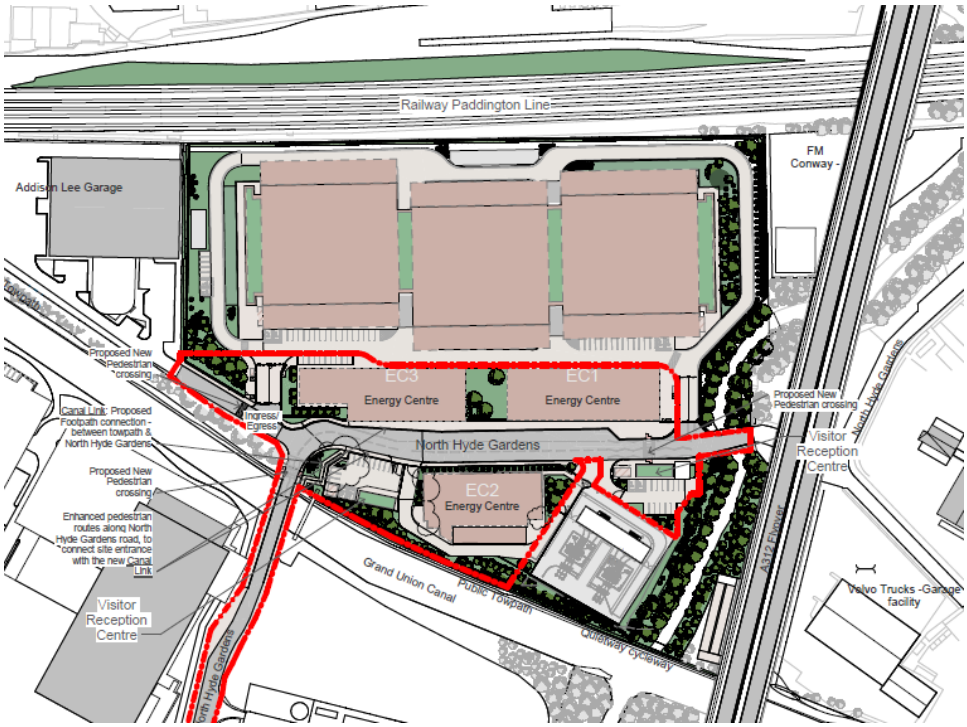


Figure 1 - Site location, layout and redline boundary (S96a (2))

3 S96a proposals

The proposed minor alterations are as follows:

- Alterations to EC2 – the addition of external stairs (screened), the reversal of the heat rejection stacks & the creation of additional GF apertures.
- VRC1 reduced from 2 floors to 1 floor.
- Changes to the towpath and VRC car parking arrangement,
- Alterations to EC3 relating to the green wall arrangement.

Refer to the diagrams on the following pages for further details.

4 Energy and sustainability assessment

An Energy and Sustainability assessment review for air quality, drainage, energy, noise and BREEAM in relation to the S96a (2) changes.

4.1.1 Air quality

Policy EM8 requires that developments should not cause deterioration in local air quality levels and should protect both existing and new sensitive receptors.

The Air Quality report confirms that there is no impact of the S96a changes:

- Background pollution concentrations across the site are likely to be below the relevant UK Air Quality Strategy Standard concentrations.
- During construction, adopting appropriate mitigation measures should prevent any significant air quality effects on the surrounding area.
- Increases in pollution concentrations due to development-generated traffic are not expected to have a significant impact on local air quality.
- Increases in pollution concentrations due to the proposed standby generators are not expected to have a significant impact on local air quality, in any normal grid failure or testing scenarios.
- The proposed development is expected to achieve air quality neutrality with respect to transport and building emissions.
- The proposed development includes several measures that will minimise the proposed development's impact on local air quality and a S106 financial contribution is proposed so that the proposed development can actively contribute to improving local air quality.
- Following the agreement of a suitable financial contribution, the proposed development is expected to actively contribute to improving air quality in line with LBH policy DMEI 14.

As the proposed development would not significantly impact local air quality, air quality should not pose any significant obstacles to the development progressing through the planning process.

4.1.2 Drainage

The proposed S96a (2) amendments have no impact on the current consented scheme in terms of the drainage system which will remain as a gravity system with the required attenuation and pollution prevention measures. Both the foul and water gravity sewers will retain the on-site drainage routes with outfalls to the Thames Water Public sewer and the River Crane respectively.

4.1.3 Energy

The proposed S96a (2) alterations for the Union Park development have been assessed with respect to the approved Energy Statement issued on 21st March 2022 and do not negatively affect the predicted carbon savings.

This S96a (2) addendum provides an update to the March 2022 Energy Statement which predicted CO_2 savings as per Table 1 below:

Table 1 – Predicted CO_2 savings (Energy Statement March 2022)

Savings from:	Regulated carbon dioxide savings	
	Tonnes CO_2 per annum	(%)
Be lean: Savings from energy demand reduction	25.6	41.16%
Be clean: Savings from heat network	-	0.0%
Be green: Savings from renewable energy	1.4	2.18%
Total cumulative savings	**27**	**43.34%**

The summary result of the updated energy model as per S96a (2) is outlined in Table 2 below:

Table 2 – Predicted CO_2 savings (S96a (2) April 2023)

Savings from:	Regulated carbon dioxide savings	
	Tonnes CO_2 per annum	(%)
Be lean: Savings from energy demand reduction	26.4	42.8%
Be clean: Savings from heat network	-	0.0%
Be green: Savings from renewable energy	1.2	2.0%
Total cumulative savings	**27.6**	**44.8%**

We can therefore conclude that the proposed changes herein are not predicted to result in an adverse change to the reported carbon savings in the approved Energy Statement from March 2022 report.

4.1.4 Noise

The proposed alterations will not alter the locations, noise levels or operational profiles of the proposed plant. As such, the proposals are not expected to result in an adverse noise impact, in comparison to the previous assessment.

4.1.5 BREEAM

A BREEAM UK NC 2018 v.3.0 pre-assessment was undertaken for the Visitor Centres and further reviewed to consider the S96a (2) updates for the following items:

- Air Quality;
- Drainage;
- Energy;
- Noise,

The above items are assessed by BREEAM under the following credit categories. There is no impact on these credits as a result of the S96a (2) changes.

- Pol 02 - Local air quality
- Pol 03 - Flood and surface water management
- Ene 01 - Reduction of energy use and carbon emissions
- Hea 05 - Acoustic performance
- Pol 05 - Reduction of noise pollution

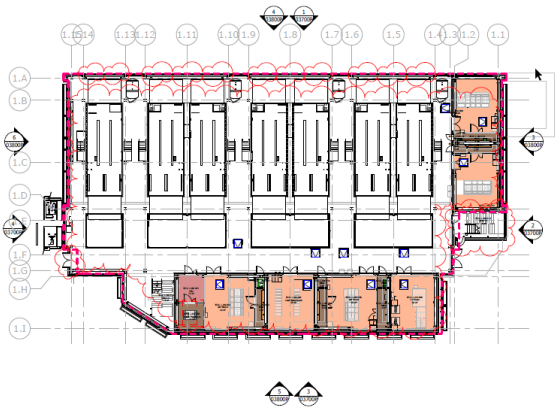
Regarding the overall BREEAM assessment, the target rating of ‘Very Good’ remains.

In summary, as a result of the proposed changes of the S96a application no obstacles to achieving the Very Good rating are anticipated.

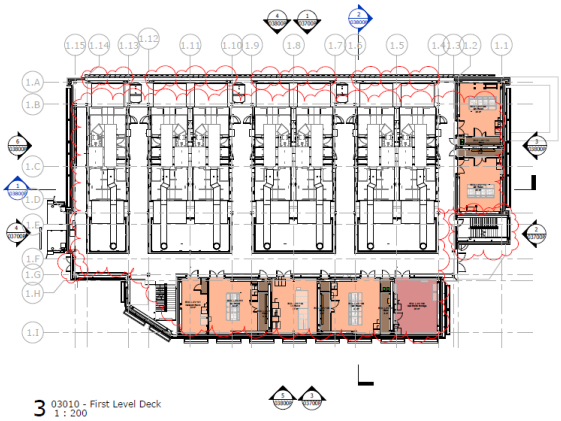
5 S96a (2) drawings

Below are the drawings showing the key updates that are included within this S96a (2) application.

EC2 Building



2 Plan (Ground Floor)
1 : 200

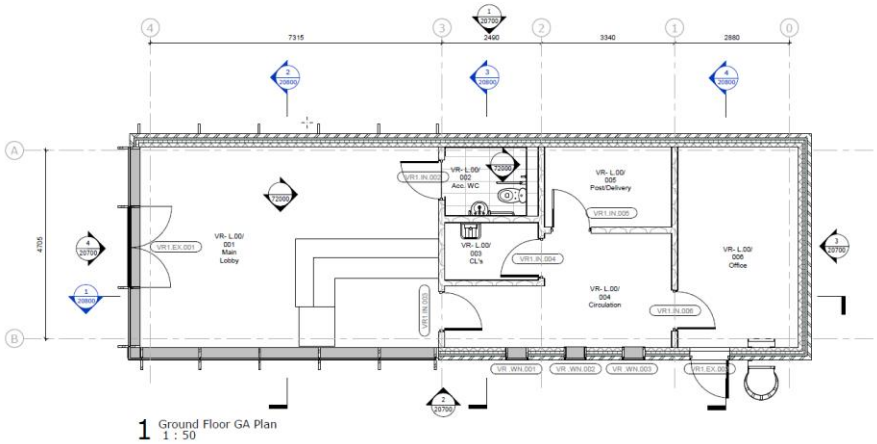


3 03010 - First Level Deck
1 : 200

4 03020 - Second Level Deck
1 : 200

5 03030 - Third Level Deck
1 : 200

VRC1 Building



1 Ground Floor GA Plan
1 : 50

8.0 Transport

Project:	ARK Union Park	Date:	05/04/2023
Reference:	75111/APP/2022/1007	Prepared By:	UG
Status:	Information	Issue:	1

Design Note: Application Ref: 75111/APP/2022/1007 - S96A - TRANSPORT

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1. HDR Assessment

The current routing and length of the proposed footpath had to be marginally adjusted to avoid existing statutory utilities. This revision has led to an improved route and reduced length of the towpath which eases pedestrian comfort.

The reduce length of the towpath meant that the entrance to the visitors' reception centre (VRC2) could be moved which led to a significant improvement of pedestrian safety from the gate to the VRC2 entrance.

In addition to the above benefits, there will be a marginal increase in soft landscaping but also a more maintainable and accessible piece of land.

There has been no impact on the number of carparking spaces which will be maintained at 11 spaces, with 2 disabled spaces and cycle storage.

Therefore, the proposed amendments as described within the S96A application under planning reference 75111/APP/2022/1007 will have no impact on the development.

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LEGEND

PLANNING BOUNDARY

10No. CAR PARKING BAYS

NEW LAY-BY FOR TEMPORARY LORRY PARKING

NEW VEHICULAR INGRESS/EGRESS TO MAIN CAMPUS

KERB ALIGNMENT TO BE ADJUSTED TO ACCOMMODATE PEDESTRIAN CROSSING

NEW VEHICULAR INGRESS/EGRESS TO VISITOR RECEPTION

NEW PEDESTRIAN CROSSING ON NORTH HYDE GARDENS BRIDGE

EXISTING PEDESTRIAN ACCESS FROM THE CANAL TOW PATH TO BE REMOVED AND REPLACED WITH NEW SHARED PEDESTRIAN AND CYCLE LINK FROM GRAND UNION CANAL TOW PATH TO NORTH HYDE GARDENS

WESTERN FOOTWAY ON NORTH HYDE GARDEN BRIDGE TO BE WIDENED TO 2.3m

NEW VISITOR RECEPTION CENTRE 2 WITH 13No. TEMPORARY CAR PARKING BAYS FOR VISITORS

VEGETATION CLEARANCE TO INCREASE FOOTWAY WIDTH

SOUTHERN FOOTWAY TO BE REINSTATED WITH FORMAL SURFACING

NEW ACCESS ROAD FOR TURNING HGV'S

NEW PEDESTRIAN WIDENINGS IN NORTH HYDE GARDENS

VEGETATION CLEARANCE TO INCREASE NORTH HYDE GARDEN CARRIAGEWAY TO INCREASE VISIBILITY

NEW PEDESTRIAN CROSSING

EXISTING ACCESS TO BE RE-INSTATED AS CARRIAGEWAY

15No. TEMPORARY CAR PARKING BAYS FOR ACCREDITATION

PROVISION FOR SHORT STAY CYCLE PARKING

NEW VEHICULAR ACCESS TO HV ENERGY CENTRE AND VISITOR RECEPTION AREA

Revision	Description	Date
P02	ISSUED FOR PLANNING	14.04.23
P01	ISSUED FOR PLANNING	11.03.22

Drawing Status: PLANNING ISSUE

Suitability:

Hurley Palmer Flatt
4th Floor
Knollys House
17 Addiscombe Road
Croydon, CR0 6SR
United Kingdom
t: +44 (0) 20 8763 5900
e: info@hurleypalmerflatt.com
w: www.hurleypalmerflatt.com

Client: ARK DATA CENTRES

Architect: NWA

Project: UNION PARK

Title: HIGHWAYS SITE LAYOUT

HDR | HPF Project Number: PUR15469

Cad File Name: HDR-0471-XX-XX-DR-C-95010

Drawn: UG | Chkd/Apprd: CR | Date: 05.04.2023 | Scale @ A1: 1:1250@A1

Drawing Number: HDR-0471-XX-XX-C-DR-95010 | Revision: P02

0 10 50 100
Scalebar 100mm at scale 1:1

File: S:\REGIONAL WORKS DRIVE\PURLEY\15000\PUR15469 - ARK PROJECT UNION\CAD\ISSUE\2023.04.05 TRANSPORT 96A (2)\HDR-0471-XX-XX-DR-C-95010.DWG User: Johnstone, Richard Sheet: HPF Plot Date: 05/04/2023 16:04:53