Sewer Surveys UK

Job Number:		Survey By: KB
Grid Ref:	Node Number: MH35	Cover Level:
Location: Hempland School		
Year Laid: Z	Status: PR	Function: FW	Node Type: MH	Survey Date: 26/01/22
Manufacturer:		Grating:

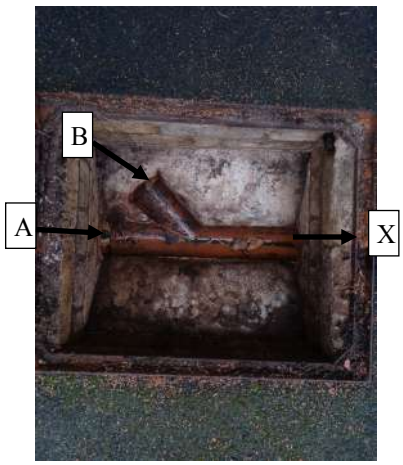
COVER	Shape: R	Hinged: /	Lockable: /	Duty:H	Size:660/520	Toxic atmos: /
SHAFT	Side Entry: /	Regulating Courses:1	Depth:/	Size:/		Vermin: /
CHAMBER	Soffit Type:/	No. of Step Irons: /	No. of Ladders: /		No. of Landings: /	
Size: 560/480	Const'n Code: BR	Depth of Flow: 5	Depth of Silt:5		H of S:/	

	Pipe	U/S D/S node Reference		Shape	Pipe Size			Backdrop Diameter	Pipe Material	Lining Material	Depth from Cover (M)	Invert Level (M)
INCOMING PIPES	**A**	XXX18		C	100				VC		0.43	
	B	XXX24		C	100				VC		0.42	
	C											
	D											
	E											
	F											
OUTGOING PIPES	**X**	MH34		C	100				VC		0.45	
	Y											

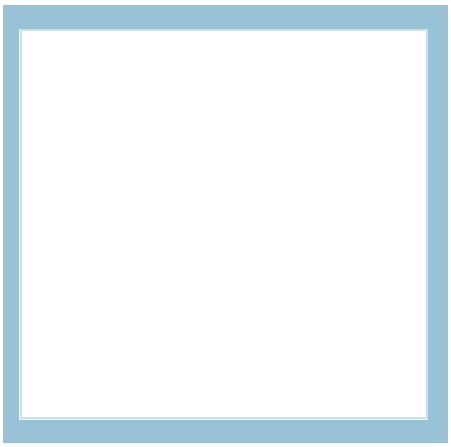
CONDITION INFORMATION Enter Y if attention required. Use Remarks to clarify

Cover		Irons/Ladders		Shaft		Chamber		Benching		Other	

Remarks:



Sewer Surveys UK LTD



CHAS
CONTRACTORS HEALTH & SAFETY ASSESSMENT SCHEME
Accredited Contractor
www.chas.co.uk

Constructionline
A UK GOVERNMENT CERTIFICATION SERVICE

safecontractor APPROVED

Unit 14b, Orgreave Close, Sheffield, S13 9NP.
Tel: (0114) 2513481 E-Mail: info@sewersurveysuk.co.uk

Appendix C Flood Risk Assessment

MOTT MACDONALD

DfE TA21 Framework - SRP Hempland Primary School

Flood Risk Assessment

December 2021

Mott MacDonald
4th Floor
Derwent House
150 Arundel Gate
Sheffield S1 2JY
United Kingdom

T +44 (0)114 2761242
mottmac.com

DfE TA21 Framework - SRP Hempland Primary School

Flood Risk Assessment

December 2021

Mott MacDonald Limited. Registered in England and Wales no. 1243967.
Registered office: Mott MacDonald House, 8-10 Sydenham Road, Croydon CR0 2EE, United Kingdom

Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
A	15/12/2021	T Fundira	J Lea-Wilson	A Precious	Issue for Approval

Document reference:

Information class: Standard

This document is issued for the party which commissioned it and for specific purposes connected with the above-captioned project only. It should not be relied upon by any other party or used for any other purpose.

We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

This document contains confidential information and proprietary intellectual property. It should not be shown to other parties without consent from us and from the party which commissioned it.

Contents

Executive summary

Mott MacDonald (MM) was commissioned to carry out a Preliminary Flood Risk and Runoff Assessment for a potential redevelopment of Hempland Primary School, Stockton Lane, York, North Yorkshire, YO31 1ET.

This report is to support an Outline Planning Application for this site and to assess the feasibility of installing a SuDS based storm water management scheme.

The site is to be assessed with regard to the requirements of the Planning Practice Guidance (PPG) and the associated Technical Guidance to determine the suitability of the proposed development on the site.

As well as fluvial flood risk the report will also assess the risk posed locally by the development itself and the runoff it may generate.

If required, mitigation measures and recommendations will be made that will enable the site to be suitably developed while actively seeking to reduce flood risk locally.

The following guidelines and references have been used in the preparation of this report:

- Planning Practice Guidance – Technical Guidance (PPG-TG)[1]
- Environment Agency Flood Risk Standing Advice for England[2]
- Mott MacDonald archives

The report is also based on additional information received from the Environment Agency (EA), and Yorkshire Water (YW) and City of York Council (CYC).

The report concludes that the development is suitable for this location and can be safely developed to manage and control all identified long-term residual flood risks in this area. The provision of a positive drainage system on the site may also contribute to a reduction in flood risk locally.

Notwithstanding this, it is demonstrated that the layout may be developed to incorporate a SuDS based system that will not only provide adequate runoff protection but will also provide an improvement in the runoff quality and bio-diversity.

1 http://planningguidance.planningportal.gov.uk/blog/guidance/flood-risk-and-coastal-change/

2 https://www.gov.uk/flood-risk-assessment-local-planning-authorities

1 Introduction

The Department for Education has commissioned Mott MacDonald on behalf of SRP Hempland Primary School to undertake a Preliminary Flood Risk Assessment relating to the proposed redevelopment of Hempland Primary School on the site shown on the location in Appendix A.

1.1 Scope and objectives of the report

The Government has placed increasing priority on the need to take full account of the risks associated with flooding at all stages of the planning and development process, to reduce future damage to property and loss of life. The PPG- Technical Guidance (PPG-TG) identifies how the issue of flooding is dealt with in the drafting of planning policy and the consideration of planning applications.

The purpose of this report is to assist our client and the Local Planning Authority to make an informed decision on the flood risks associated with the site development.

Local Planning Authorities have the powers to control development in accordance with the guidelines contained in PPG-TG and are expected to apply a risk-based approach to development with the Sequential Test in Table 1.1. This sets out a sequential, characterisation of flood risk in terms of annual probability of river, tidal and coastal flooding.

In accordance with the technical guidance, sites are to be classed as follows:[3]

Table 1.1: Flood Zones – PPG-TG Table 3

Flood Zone	Appropriate Users
Flood Zone 1 - Low Probability This zone comprises land having less than 1 in 1000 annual probability of river or sea flooding (<0.1%)	All uses of land are appropriate in this zone
Flood Zone 2 - Medium Probability This zone comprises land assessed as having between 1 in 100 and 1 in 1000 annual probability of river flooding (1%-0.1%) or between 1 in 200 and 1 in 1000 annual probability of sea flooding (0.5%- 0.1%) in any year	The water-compatible, less vulnerable and more vulnerable uses of land and essential infrastructure in Table D.2 are appropriate in this Zone Subject to the Sequential Test being applied, the highly vulnerable uses in Table D.2 are only appropriate in this zone if the Exception Test is passed
Flood Zone 3a - High Probability This zone comprises land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%) or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year	The water-compatible and less vulnerable uses of land in Table D.2 area appropriate in this zone. The highly vulnerable uses in Table D.2 should not be permitted in this zone. The more vulnerable and essential infrastructure uses in Table D.2 should only be permitted in this zone if the Exception Test is passed. Essential infrastructure permitted in this should be designed and constructed to remain operational and safe for users in time of flood.

[3] https://www.gov.uk/guidance/flood-risk-and-coastal-change#Table-1-Flood-Zones

Flood Zone 3b - Functional Floodplain This zone comprises land where water has to flow or be stored in times of flood. SFRAs should identify this Flood Zone (land which would flood with an annual probability of 1 in 20 (5%) or greater in any year or is designed to flood in an extreme (0.1%) flood, or at another probability to be agreed between the LPA and the Environment Agency, including water conveyance routes)	Only the water-compatible uses and the essential infrastructure listed in Table D.2 that has to be there should be permitted in this zone. It should be designed and constructed to: Remain operational and safe for users in times of flood. Result in no net loss of floodplain storage; Not impede water flows; and not increase flood risk elsewhere. Essential infrastructure in this zone should pass the Exception Test.

Source: https://www.gov.uk/guidance/flood-risk-and-coastal-change#Table-2-Flood-Risk-Vulnerability-Classification

The objectives of this report are to:

- Establish and evaluate viable flood risks to the development.
- Identify strategies of mitigating any residual flood risks.
- Identify a surface water and runoff management strategy to positively impact on the flood risk on the site and downstream using SuDS principles.

1.2 Sources of Information

The following have been acquired for the completion of this report:

- Groundwise Utility Report URO7492.1DM
- 1062 Hempland DA Pre-Feasibility Assessment - 02.09.2021 FINAL
- Greenhatch Topographical Survey - 41967_T_REV0
- Greenhatch Underground Utilities Survey - 41967_UG_REV0
- 3047-54-Hempland RCA - Red line area plans

The following freely available online sources of information have been used for this report:

- Environmental Agency on-line flood maps for planning.
- British Geological Society (BGS) WMS (Web Mapping Services) data.

1.3 Development proposal

The current site options: Green, Amber and Red for the proposed redevelopment of Hempland Primary School are included in Figure 3.4. These options are described in more detail in the report '3047-54-RCA-00-XX-RP-A-0110-S1-P2-Hempland Feasibility - Meeting 2'. All options include the demolition of all the accommodation (excluding all ancillary (ANC) accommodation) which is noted in the CDC report (see Appendix G). It has been advised by the client that the preferred option is the Amber option.

The proposed redevelopment will also consist of the construction of a new build accommodation, car parking, hardstanding play area and playing fields.

Below is a summary of the pre and post impermeable areas:

Table 1.2: Summary of impermeable areas

	Pre-construction		Post-construction	
	Block	**Area (m^2)**	**Block**	**Area (m^2)**
	ANC1	190	ANC1	190
	ANC2	3	ANC2	3
	EFAA	2,410	New Build	1,200
	EFAB	36	Hard Standing	4,380
	Hard Standing	4,380		
Total		7,019		5,773

Consequently, the impermeable area is anticipated to reduce from approximately 7,000m^2 to approximately 5,800m^2 post-construction, this is a reduction of approximately 17%.

It is noted that the impermeable areas found in Table 1.2 for the blocks, new build and hard standing paving were taken from the CDC report (see Appendix G), the RIBA Stage zero report (1062 Hempland DA Pre-Feasibility Assessment - 02.09.2021 FINAL) and from the architects red line plans (3047-54-Hempland RCA - Red line area plans) respectively.

1.4 Limitation of this report

Mott MacDonald has followed accepted procedure in providing the services but given the residual risk associated with any prediction and the variability which can be experienced in flood conditions, we take no liability for and give no warranty against actual flooding of any property (client's or third party) or the consequences of flooding in relation to the performance of the service. This report has been prepared for the purposes of planning approval only and is to assist our client and the Local Planning Authority to make an informed decision on the flood risks associated with the site redevelopment.

Allowance for the effects of climate change will be made in accordance with government recommendations in place and statistical data available at the time of writing this report. These recommendations may become more onerous, and the statistical data may be revised in the future; we will not make any estimate of what changes may result from this. Please be aware that this, and other issues over which the Mott MacDonald has no control, may affect future flood risk at the development and require further work to be undertaken for which we accept no liability.

2 Existing Site

2.1 Site Location

Hempland Primary School, York is located on Whitby Avenue, Stockton Lane approximately 1.6 miles north-east of York (Grid reference - SE 62430 53001), the site is primarily accessed from Whitby Avenue. The site location is provided in Figure 2.1 (and Appendix A).

2.2 Site Details

A general description of the site is presented in Table 2.1 based on information available online. No site walkover has been undertaken at the time of writing.

The overall area considered as the development site measures approximately 2.2ha. A topographical survey provided by Greenhatch Group (41967_T_3D_REV0) of the existing site is provided in Appendix B.

The site is bound to the north and east by residential properties. To the immediate south and west are some areas of green space and playing fields beyond the school boundary and beyond those further residential properties. It is also noted that the southern boundary is bounded by a watercourse, known as Tang Hall Beck. Further west of the school are the suburbs of the city of York (see Figure 2.1).

The existing topographical survey provided by Greenhatch Group (41967_T_3D_REV0) indicates that the levels across the site generally slope from north to south, with a high spot of approximately 14.1mAOD to the northeast and a low spot of approximately 11.4mAOD in the southeast (see Appendix B).

Figure 2.1: Indicative Site Plan

Source: © Microsoft corporation © 2020Maxar © CNES(2020) distribution Airbus DS

Table 2.1: General site details

Site Name	SRP Hempland Primary School
Address	Whitby Avenue Stock Lane York North Yorkshire, Y031 1ET
Local Authority	City of York Council
National Grid Reference (NGR) / coordinates	SE 62430 53001
Site Description and Topography	The existing topographical survey provided by Greenhatch group indicates that the levels across the site generally slope from north to south, with a high spot of 14.1mAOD to the northeast and a low spot of approximately 11.4mAOD in the southeast (see Appendix B).
Surrounding Area	**North** Residential Properties
	East Residential Properties
	South Green space and a watercourse, and residential properties further south
	West Green space, playing fields, followed by allotments with residential properties further west

2.3 Existing Site Drainage

The development site is currently occupied by education buildings, access roads, playing fields, hardstanding play area, soft landscaping and car parking. With reference to the underground utility survey, 41967_UG_REV0 (see Appendix C) there is a separate foul and surface water drainage system present on the site. Furthermore, with reference to the utility records it appears that all surface water drainage discharges to the watercourse, Tang Hall Beck to the south of the site via a headwall.

The survey indicates that access roads and car parking are generally drained by kerb and gully systems linked to 100mm diameter carrier pipes (with a slope of approximately 1v:200h) and chambers, which in turn connect to the private surface water system north of the main building block.

The utilities survey shows that the foul drainage on the site discharges to the north of the site, via a 150mm diameter foul private sewer pipe to a manhole on Whitby Avenue, with a cover level of 13.50mAOD.

A site topographical survey is included in Appendix B for reference which identifies the surface features of these systems.

At present it is understood that there are no onsite flow attenuation or flow control devices upstream of the connections to the adopted assets or the watercourse.

2.4 Existing Land Drainage

Hempland Primary School note that there is no land drainage present on the site. However, the playing field used to have a series of land drains that drain southwards (see the report 'Hempland Primary Preliminary Archaeology and Heritage Survey Clean'). These are understood to be historic and so may have been removed or truncated as part more recent landscaping.

2.5 Existing Watercourse

The nearest recorded watercourse to the site is Tang Hall Beck, which forms the site boundary to the south of the playing fields; this watercourse flows east to west, discharging to the River Foss 1.4km to the west.

3 Sources and Extents of Flooding

3.1 Summary

Table 3.1: Summary of sources and extent of flooding

Potential Source of Flooding	Is there a risk to the development?	Flood Risk Category	Comments
Fluvial Flooding	Yes	Medium – High (localised)	Majority of the site is in Flood Zone 1 with the southern border by the watercourse in Flood Zone 3
Pluvial Flooding and Overland Flow	No	Low - Medium	Low-Medium risk from pluvial flooding is adjacent to the watercourse. However, the watercourse is at a lower level than the site.
Ground Water Flooding	No	Low	No evidence. It is recommended that the site is monitored.
Adopted Drainage	No	Low	No sign of adopted drainage on site. The impact of potential surcharge in the adopted assets surrounding the site is low.
Private Drainage	Yes	Low	The Trust reported some issues with surface flooding localised to the staff/visitor car park, which floods in heavy rain. This is likely to indicate that either the existing drainage system is under sized and/or not maintained.
Highway Drainage	No	Low	The adopted system outside of the site is at risk of localised failures but these will be small volume and are remote from the site.
Reservoir Flooding	No	n/a	Not in flood envelope for reservoirs.
Development Drainage	Yes	Medium	New development will require mitigation. Reduction in impermeable area post-development.

3.2 Natural Drainage

3.2.1 Fluvial Flooding

3.2.1.1 Source and Extent

With reference to the EA's indicative flood maps accessed in November 2021, the majority of the site is shown to be in Flood Zone 1, with only a very small portion of the site to the south in Flood Zone 3. An extract is included in Figure 3.1.

Figure 3.1: Environment Agency online flood map showing fluvial flood risk

Source: EA flood maps - © Crown copyright and database rights 2020 OS 100024198. Use of the address and mapping data is subject to the terms and conditions.

3.2.1.2 Flood Risk to Development

The majority of the site is in Flood Zone 1; however, the southern border of the site is shown to be in Flood Zone 3 and therefore is considered to be at a high flood risk from this source (annual probability of flood risk from this source >1%). This flood risk is due to the close proximity to the beck at the south of the site. It should be noted that this flood risk is away from the school buildings and playing fields, and therefore only poses a low risk to the development.

With reference to the topographical survey there is approximately 1.2m of freeboard between the development part of the site and the watercourse. Given this level difference the existing developed part of the site is shown to be at very low risk of flooding.

3.2.2 Pluvial Flooding

3.2.2.1 Source and Extent

Surface water flood mapping is available from the EA's website, accessed in November 2021. This provides indicative modelling of the potential overland flow routes and ponding that could occur should existing drainage systems become inundated or blocked.

The EA's online mapping shows that majority of the site may be at very low risk of surface water flood risk with the exception of southern boundary which has a low to medium pluvial flood risk. As shown in Figure 3.2 below.

The flood risk categories for surface water risk are defined thus:

High Risk - means that each year this area has a chance of flooding of greater than 3.3%. Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.

Medium risk - means that each year this area has a chance of flooding of between 1% and 3.3%. Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.

Low risk - means that each year this area has a chance of flooding of between 0.1% and 1%. Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.

Very low risk - means that each year this area has a chance of flooding of less than 0.1%. Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.

Figure 3.2: EA online flood map showing surface water flood risk

Source: EA flood maps - © Crown copyright and database rights 2020 OS 100024198. Use of the address and mapping data is subject to the terms and conditions.

3.2.2.2 Flood Risk to Development

The flood risk identified in the pluvial flood mapping above needs to be assessed in context.

There are areas of low to medium flood risk on the southern boundary which is due to its proximity to the watercourse. This manifests as surface ponding or overland flow. This is located on the bank of the water course along the southern boundary of the development site. An elevated surface water flood risk around a watercourse is to be expected. The mapping does not show this impinging on the playing fields or other areas of the school site. With reference to the topographical data (see Appendix B) it is also noted that the watercourse is approximately 0.45m lower than the lowest level of the sports pitch. There is therefore no flood risk from this source to the operation of the development.

3.2.3 Overland Flow

3.2.3.1 Source and Extent

Overland flow is generated by adjacent developments or infrastructure. This can be a source of risk in times of extreme rainfall which exceed the events the drainage systems are designed for or if the drainage systems fail or become blocked.

The EA pluvial mapping can also be used to assess this flood risk as it identifies overland flow routes based on existing level data.

3.2.3.2 Flood Risk to Development

According to the topographical survey of the site (see Appendix B) the school site is at a higher level than the watercourse; therefore, the flood risk from this source is very low. Additionally, it is noted that the school is higher than the playing field to the west so is not at risk of overland flow from this source.

The back gardens of the surrounding properties to the north and west of the site as these are at a higher level than the school site (as shown on topo ref - 41967_T_REV0). The area of the gardens totals approximately 10,000m^2. Assuming half of this area is impermeable, this could generate runoff of approximately 70l/s onto the school site. However, the properties should have positive drainage systems to mitigate most of this risk, zero residual would be localised failures of the positive or run-off from the rest of the gardens on the site boundary. Residual risk is only there if the new build is located along the boundary.

3.2.4 Ground Water Flooding

3.2.4.1 Source and Extent

There is no evidence locally of elevated ground water levels such as ponds or marshes within the development site.

Additionally, according to the BGS website local borehole records of depth 2.70m (BGS Reference: SE65SW80[4]) did not encounter groundwater, suggesting groundwater is below this level.

3.2.4.2 Flood Risk to development

Given the absence of groundwater encountered in the boreholes, the presence of elevated groundwater is not anticipated on this site although some perched water may be encountered in the made ground depending on its composition. This should be verified at a later stage through ground investigation. It is noted that deep foundations or trenches will be at higher risk of impact from this source and should be avoided where possible.

[4] Page 2 | Borehole SE65SW80 | Borehole Logs (bgs.ac.uk)

3.2.5 Climate Change

The Environment Agency requires, in accordance with the Government's PPG-TG document, that there should be no increase in the rate of surface water emanating from a newly developed site above that of any previous development. Furthermore, it is the joint aim of the Environment Agency and Local Planning Authorities, to actively encourage a reduction in the discharge of storm water as a condition of Approval for new developments. In addition, all drainage systems should be sized to accommodate the runoff arising from a 1 in 100-year rainfall event and should include a further allowance to account for the further effects of climate change. Table 3.2 below, shows the anticipated increases in rainfall intensities and river flows with time, and has been reproduced in part from Table 4 of PPG-TG.

Table 3.2: Climate Change Allowances

Type	Applies across all of England	2015 to 2039	2040 to 2069	2070 to 2115
River	Upper End	25%	50%	105%
	Central	10%	20%	35%
Rainfall	Upper End	10%	20%	40%
	Central	5%	10%	20%

Source: https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

3.2.5.1 Flood Risk to development

Consideration of future climate change needs to be given to the drainage design such that it is suitably sized for the lifetime of the development.

Educational developments have an assumed design life in excess of 50-years. It is noted that construction is due to be complete by 2024, therefore the building is assumed to be operation into the 2070s. Therefore, for rainfall, an average climate change allowance of 30% has been used for design and 40% for checking the sensitivity of the drainage systems.

3.3 Artificial Drainage

3.3.1 Adopted Drainage

3.3.1.1 Source and Extent

Yorkshire Water sewer records have been obtained for the site and the surrounding area and are included in Appendix D.

The records show there to be no known adopted drainage assets within the site boundary.

Outside the site boundary, the records show a 225mm diameter foul water sewer to the north of the site running in a westerly direction parallel to Whitby Avenue, this sewer is the nearest foul sewer to the site. The nearest surface water sewer is also in Whitby Avenue. The records show this to be a 300mm diameter surface water sewer that runs in a easterly direction.

Additionally, there is a 375mm diameter surface water sewer under Applecroft Road to the east of the site. There is also a 225mm diameter foul water sewer on the same road. Both of these sewers run north to south.

3.3.1.2 Flood Risk to development

There are no known adopted drainage assets on the site. In addition, the surface water drainage for the site discharges to the beck to the south and does not connect to the adoptable surface water sewers surrounding the site. Whitby Avenue is also at a lower level than the site, as the road is lower it cannot run on to the site if a sewer were to fail there, the exceedance route would be down Whitby Avenue. As such there is not considered to be a residual flood risk from this source to the development.

3.3.2 Private Drainage System

3.3.2.1 Source and Extent

The existing private drainage is a separate surface water and foul water system which is shown to extend across the full site area.

The car parks (in the north) and access roads surrounding the site drain via kerbs and gullies to the private surface water sewer. All buildings drain via rainwater pipes to the private surface water sewer. The utilities records do not indicate the presence of flow controls or attenuation in this system.

It is noted that in the report 'Hempland Brief for Internal Surveys' the Trust reported that drainage issues are generally caused by grease back up from the kitchens, which despite cleaning regularly still backs up and causes issues. They also noted that there are some issues with surface flooding localised to the staff/visitor car park which floods in heavy rain. This is likely to indicate that either the existing drainage system is under sized and/or not maintained.

It is noted that in the staff/visitor car park area is drained by two gullies, this system could be retained with the new development, subject to further survey.

3.3.2.2 High Level Capacity Check of existing system

Primarily looking at the surface water pipe from the remaining accommodation blocks (ancillary (ANC) accommodation), there is approximately 230m^2 of impermeable area which will remain. This has the potential to generate runoff of approximately 3 l/s (in a 50mm/hr rainfall event). This area drains to a single 150mm diameter pipe, which is in the northeast of the site. Based on Appendix C, this pipe has a gradient of 1v:340h which equates to a full-bore capacity of approximately 3.2 l/s.

3.3.2.3 Flood Risk to development

Based on this high-level assessment it is considered that the existing drainage in this area is likely to be adequate for the remaining accommodation blocks (ancillary (ANC) accommodation).

Therefore, when considering the new drainage for the development of the site, flow rates should be restricted to existing rates (or lower) so as to not put additional strain on the existing drainage system.

It is also noted that majority of the existing school drainage will be removed. Therefore, the risk from this source will be largely removed when the new drainage is installed.

3.3.3 Highway Drainage

3.3.3.1 Source and Extent

The site is not directly served by adopted highway drainage as the site has its own private road network. However, there is a highway (Whitby Avenue) to the north of the development which

can be seen to have a number of gullies and have 225mm and 300mm diameter drains. It is estimated that Whitby Avenue would drain an area of approximately 20,000m^2.

There is also Applecroft Road in the east which has a number of gullies and has a 375mm diameter drain, this would drain an area of approximately 10,000m^2. It is noted that both roads are at a lower than the development site.

No records were available at the time of writing to confirm where the highway drainage outfalls to.

3.3.3.2 Flood Risk to development

It is considered that the site is at very low risk from this source as the site is largely protected by the topography of the surrounding carriageway and the numerous gullies located therein. According to the topographical survey, both Whitby Avenue and Applecroft Road slope away from the site. Therefore, if the highway drainage were to surcharge, surface water would spill down the roads away from the development site. The adopted system outside of the site is at risk of localised failures but these will be small volume and remote from the site.

3.3.4 Reservoir Flooding

3.3.4.1 Source and Extent

With reference to the EA's online mapping, data related to the risk of potential reservoir flooding is also provided.

Figure 3.3: EA online flood map showing reservoir flood risk

Source: EA flood maps - © Crown copyright and database rights 2020 OS 100024198. Use of the address and mapping data is subject to the terms and conditions.

3.3.4.2 Flood Risk to development

This shows that the site is not at risk of reservoir inundation.

3.3.5 Development Drainage

3.3.5.1 Source and Extent

The existing development is estimated to have an impermeable area of approximately 7,000m² (see Table 1.2), with the remainder of the site consisting of soft landscaping of approximately 15,000m².

The proposed design of the school development will be developed at future stages using data from this assessment and others. Currently there are three potential development options shown in Figure 3.4.

For this report, the amber option will be assessed as this is currently the preferred option according to the client.

The current development proposal for the amber option is estimated to consist of approximately 5,800m² of impermeable area (see Table 1.2) with the remaining area of 16,200m² assumed to be soft landscaping.

As the plans change and develop then this area assessment will need to be revisited but the overall principles will be the same.

Figure 3.4: Indicative Proposed Plan Site Options

Source: 3047-54-RCA-00-XX-RP-A-0110-S1-P2-Hempland Feasibility - Meeting 2

3.3.5.2 Flood Risk to development

As stated above in section 3.3.5.1 the existing site is estimated to have an impermeable area of approximately 7,000m². This would generate approximately 97 l/s of runoff (for a rainfall intensity of 50mm/hr).

The remaining undeveloped area of the site is approximately 15,000m² and is estimated to generate approximately 5.6 l/s of runoff (Q_{bar}), calculations for this area are included in Appendix E.1. Thus, from this initial assessment the total runoff for the existing site would be approximately 103 l/s. This figure will need confirmation at the next design stage when the proposed layout is more accurately defined.

It is noted that according to the utilities survey (see Appendix C) and the topographical data (see Appendix B) the offsite connection to the southeast of the site is a 300mm diameter pipe with a gradient of 1v:155h therefore, the hydraulic capacity of the pipe is approximately 89 l/s.

The proposed development has an impermeable area of approximately 5,800m². This would generate approximately 81 l/s of runoff (for a rainfall intensity of 50mm/hr). The remaining undeveloped area of the site is approximately 16,200m², this would generate approximately 6.0 l/s of runoff (Q_{bar}), calculations for this area are included in Appendix E.2. Thus, from this initial assessment the total runoff for the developed site would be approximately 87 l/s. This figure will need confirmation at detailed design stage.

Based on the RIBA stage zero report and the site plan provided by the architect (3047-54-Hempland RCA - Red line area plans). It is estimated that the overall footprint of the development, post-construction will decrease by approximately 1,200m² and thus there will be a decrease in the runoff profile of the site.

The reduction in impermeable area from pre-development to post-development is approximately 17%. This will have a positive impact on flood risk compared to the existing site drainage, as can be seen above by the decrease in runoff rates between the two sites. According to the LLFA guidance[5] where a brownfield site is redeveloped, proposals are to provide a minimum betterment of the surface water runoff rate of 30%. Since a 19% reduction to runoff rates in the post-development scenario is not sufficient on its own to achieve this betterment, a flow control device and attenuation would be required to further reduce the runoff rates such that there is a minimum 30% betterment of runoff rates. The development drainage strategy should make use of a SuDS based system. It is noted all of the existing site's surface water drainage discharges directly to the watercourse.

[5] https://www.york.gov.uk/downloads/file/2724/sustainable-drainage-systems-guidance-for-developers

4 Sequential Test

4.1 Application

The Sequential Test is designed to direct development towards areas of lower flood risk, however, where suitable sites do not exist in Flood Zone 1 sites in Flood Zone 2 and then 3 may be considered.

The majority of the site is shown to be within Flood Zone 1 and has a less than a 0.1% annual probability of flooding from fluvial sources. However, within the site a small portion on the southern boundary is currently classed as being in Flood Zone 3 and having a greater than a 1% annual probability of flooding from fluvial sources, this places the site in the highest flood classification.

The development flood risk vulnerability classification is ‘more vulnerable’ in accordance with Table 2 of the PPG [6] the Sequential Test. However, as this is a redevelopment of an existing school it cannot be viably located elsewhere.

4.2 Sequential Test

As the majority of the site including the school building and associated hard standing areas are shown to be wholly within Flood Zone 1 and outside the influence of any other local flood risk elements, in accordance with table 3 of the PPG it is concluded that the development is suitable for this location and the Sequential Test is deemed to have been passed.

Notwithstanding this as this is like-for-like redevelopment the sequential test is not applied.

[6] Technical Guidance to the National Planning Policy Framework (publishing.service.gov.uk)

5 Flood Risk Mitigation

5.1 Summary

Of the identified flood risk, the residual risks to be addressed at this stage are:

- Fluvial flood risks.
- Control of runoff generated by the development of the site.

5.2 Fluvial Flood Risk

With reference to the EA's indicative flood maps accessed in November 2021, the majority of the site is shown to be in Flood Zone 1, with only a very small portion of the site to the south in Flood Zone 3. An extract is included in Figure 3.1.

As outlined in section 4, the site has been shown to pass the sequential test.

It is proposed that the fluvial flood risk be managed by keeping the development away from the southern boundary of the site which is adjacent to the watercourse. It is noted that the watercourse is much lower than the site, therefore if the development is retained to the north (away from the southern boundary) there will be a lower risk from this source.

Additional measures such as a fence (if not already present) should be installed along the southern boundary to prevent school children from accessing the watercourse.

5.3 Control of runoff generated by the development of the site

It should be acknowledged that the satisfactory collection, control and discharge of storm water is now a principal planning and design consideration.

Part H of the Building Regulations 2015 recommends that surface water run-off shall discharge to one of the following, listed in order of priority:

- An adequate soakaway or some other adequate infiltration system, or where that is not reasonably practicable;
- A watercourse, or, where that is not reasonably practicable;
- A surface water sewer

Any new drainage system should revert back to this hierarchy even where existing systems don't comply.

The design should seek to improve the local run-off profile by using systems that can either attenuate run-off and reduce peak flow rates or positively impact on the existing flood profile.

5.3.1 Infiltration Based Systems

With reference to the British Geological Survey on-line data, the site is described as being underlain by Sherwood Sandstone Group, with superficial deposits of Alne Glaciolacustrine Formation – Clay, Silt. Nearby borehole (BGS Reference: SE65SW79[7]) describes the ground as consisting of clay to a depth of 10m below ground level.

It is also noted that the area to be developed is currently already in use and as such disturbed or made ground is anticipated to depths of approximately 0.50m to 1.0m, which would reduce infiltration potential on the site. The depth of made ground and clay are likely to make infiltration

[7] Page 1 | Borehole SE65SW79 | Borehole Logs (bgs.ac.uk)

unviable, however this should be confirmed with soakaway tests and groundwater monitoring at a later stage.

5.3.2 Watercourse

The nearest watercourse is Tang Hall Beck which is located on the southern boundary of the site. The utility survey show that the existing site surface water discharges into this watercourse. Since the site currently discharges to this watercourse, and given that infiltration appears unviable, it is proposed to reuse this connection for the new development.

5.3.3 Adopted Sewers

A connection to an adopted surface water sewer has been discounted as a connection to the watercourse appears to be feasible.

5.4 Allowable Site Discharge

Discharge to a watercourse, specifically to the Tang Hall Beck in the south of the site, is the preferred method of discharge for this development.

The allowable site discharge has been calculated using the Rational Method for impermeable areas. The existing site runoff calculation is included in section 3.3.5.

With reference to LLFA guidance[8], where a brownfield site is redeveloped, proposals are to provide a minimum betterment of the surface water runoff rate of 30%. The LLFA guidance also notes that the existing brownfield runoff rate should be calculated using 140l/s/ha. The existing runoff rate is calculated as 97l/s, therefore the allowable runoff rate using a 30% betterment is 68l/s. As mention in section 3.3.5.2 the existing pipe outlet capacity is 89 l/s, therefore the allowable site discharge is lower than the capacity of the offsite connection.

There is likely to be an existing Ordinary Watercourse Consent (OWC) application required for discharge to the watercourse. This would need to be varied if this connection is reused.

5.5 Site Attenuation

The provision of suitable attenuation on site to mitigate flood risk resulting from the development of the site will be a key factor in the evolution of the site development layout.

The provision of attenuation will be necessary in this case and can be achieved by a number of methods; however, not all systems can be assessed in direct comparison.

One of the aims of PPG is to provide not only flood risk mitigation but also maximise additional gains such as improvements in runoff quality and provision of amenity and bio-diversity. Systems incorporating these features are often termed Sustainable Drainage Systems (SuDS) and it is a requirement of PPG that these are considered as the primary means of collection, control and disposal for storm water as close to source as possible.

The volume of attenuation required for the development may be estimated using the hydraulic design software programme MicroDrainage.

The total post-development impermeable area is estimated to decrease by around 1,200m² from 7,000m² to 5,800m². Flood Studies Report criteria of M5-60= 19.0mm and ratio R = 0.4 have been used for the assessment with C_v values of 1.0 and 0.84 for Summer and Winter storms.

Using the Quick Storage Estimate feature on MicroDrainage, a maximum allowable discharge rate of 68 l/s would require approximate attenuation volumes of between 133m³ and 238m³.

[8] https://www.york.gov.uk/downloads/file/2724/sustainable-drainage-systems-guidance-for-developers

This could be accommodated through one or several SuDS options as outlined in section 5.6, providing the overall system complies with runoff quality as outlined in section 5.7.

5.6 Sustainable Drainage Systems (SuDS) and Water Quality

The most appropriate attenuation system should satisfy four main characteristics:

- Provide the required volume of storage to satisfy water quantity requirements
- Provide the required level of treatment to satisfy water quality requirements
- Minimise the loss of developable land and biodiversity
- Where possible provide local amenity

A summary of the various types of attenuation is included below.

The application of the 'SuDS Manual' CIRIA report C753 for new developments requires that the runoff from sites is not only restricted to meet the pre-development runoff characteristics but also that SuDS systems are utilised to improve the quality of the runoff prior to outfall to watercourses.

The manual and EA guidance applies a sustainability hierarchy to the various types of SuDS systems, this is summarised in Table 5.1.

Table 5.1: SuDS Hierarchy

	SuDS Technique	Flood Reductions	Pollution Reductions	Landscape & Wildlife Benefit
Most Sustainable	Living Roofs	√	√	√
↑	Basins and Ponds ● Constructed Wetlands ● Balancing Ponds ● Detention Basins ● Retention Ponds	√	√	√
↑	Filter strips and swales ● Infiltration devices ● Soakaways ● Infiltration trenches and basins	√	√	√
↑	Permeable surfaces and filter drains ● Gravelled areas ● Solid paving blocks ● Porous paviours	√	√	
Least Sustainable	Tanked Systems ● Oversized pipes/ tanks ● Cellular Storage	√		

Source: CIRIA SuDS Manual C753

Systems at the top of the hierarchy provide a combination of attenuation, treatment and ecology and are deemed the most sustainable options. There are always specific scenarios where some systems are more suitable than others and at this stage it is not possible to guide the development towards a particular strategy. However, included below are summaries of some of the main types of SuDS systems that may be applied to the development outlining the main benefits and constraints to their application.

In addition to the above hierarchy, the CIRIA SuDS Manual C753 outlines the simplified index approach to determine the required level of treatment to ensure that the receiving watercourses are not put at risk of pollution by new development.

5.6.1 Living or Green Roofs

Larger areas of roof may be designated as living or green roofs to provide both point water treatment and significant enhancement of local biodiversity.

If considered at the outset of the design of a unit, a green roof can be integrated within the provision of a roof terrace area to multiply the benefits, alternatively, a maintained roof can be installed that may require specialist access.

There are numerous propriety systems available on the market to suit various specific applications and it is recommended that if these systems are being considered discussion with several suppliers is instigated as soon as possible.

For this development, there is a large area of new roof in the development proposals that could potentially be used as an extensive green or blue roof, this should be considered as part of the development proposals.

5.6.2 Ponds and Basins

The nature of these systems is such that the run-off from the development can be treated by biological action and stilling to significantly improve the quality of water discharged from the system.

Basins also provide large areas of open space that can be developed for recreational uses or as new habitat for wildlife.

Both systems do, however, take up developable land and have residual maintenance and liability issues attached to their implementation.

In this case, the topography of the site may permit an elongated basin along the south of the site, this could also be used as a focal point for biodiversity net gain. There is a great deal of the site development area allocated for open space into which a detention basin could be located. As the site is a school site, a basin would need to have safety measures in place to prevent access during times of flooding.

5.6.3 Filter Strips and Swales

Often used adjacent to roads and footpaths, swales and filter strips can be used to collect water directly from linear features, percolate some of the flow, attenuate and then discharge the flow to either a traditional system or a secondary SuDS device.

The use of these systems is more suited to linear applications such as roads as the typical cross section is relatively small and longer runs are required to provide attenuation volume.

Filter strips will be smaller in plan area than a swale although the swale can be landscaped to be incorporated into the verge of the carriageway, combining two functions.

Land take can be relatively small in comparison to other systems and both types perform well in improving water quality. They are also ideally suited for disposal of water via secondary infiltration.

Filter strips are suitable for this development, providing they are used with another SuDS feature such as a filter drain they could be located along the edges of the car park or the hardstanding play area. A swale on its own would not able to provide the required attenuation volume. However, a swale could be used to provide secondary treatment. The use of this system may require some alterations to the proposed layout, but it would have biodiversity and habitat creation benefits.

A swale could be located along the edges of the hard surface around the school buildings as a collection and conveyance system. The development of a road corridor to accommodate these features should be considered in the developing design.

5.6.4 Rain Gardens

Rain gardens are designed to mimic the natural water retention of undeveloped land and reduce the volume of rainwater running off into drains from impervious areas. They also have the added benefit that they are able to treat low levels of pollution. In construction, they are shallow depressions with absorbent, yet free draining soil which are populated with plants that are able to withstand temporary flooding conditions.

Rain gardens could be used as part of the collection and conveyance of rainwater in small quantities. These systems also provide amenity benefits and have a unique advantage in this scenario as they could be used for educational purposes.

5.6.5 Permeable Paving

Larger areas of hardstanding can easily be converted to provide significant volumes of storage. These systems also encourage biological treatment of flow and extraction of oils and heavy metals from the run-off.

Land take is reduced as storage is located under car parks and access roads. However, maintenance is potentially a long-term issue and the possibility of the paving being damaged dug up and not properly reinstated or not regularly swept could lead to compromising the future capacity of the system.

This system will negate the need for a separate collection system such as kerbs and gullies. It will also assist in reducing the flood profile of the site by significantly detaining the run-off from the development within the sub-base material.

There is no specific amenity provided by the system other than enabling other areas to be utilised for development rather than potentially sterilizing area with an easement for a sewer or stand-off for a basin.

These systems may be incorporated into normal car-parking areas but may not be suitable for areas accessed by larger vehicles without careful detailing. These systems can also be used in conjunction with geo-cellular attenuation where large attenuation volumes are required.

Permeable paving would provide the required level of treatment for the development (see Table 5.2). It is thought that this type of system could be easily incorporated into the development proposals.

5.6.6 Cellular Storage

Large volumes of storage can be provided under grassed and lightly trafficked areas by using proprietary geo-cellular systems. This will maximise the developable area of the site.

There are no specific mechanisms within the system designed to treat flow, but extended detention times will allow sedimentation reducing the suspended solids within the discharge.

There is no creation of amenity by the installation of these types of systems, indeed by maintaining access to the system small areas may need to be reserved.

If the developable footprint is constrained then these systems may be advantageous, however, to ensure suitability it is recommended that the use of these systems is discussed with the maintaining body as they are not always preferred.

The installation of cellular storage requires significant excavation and therefore where space is not a critical issue other forms of attenuation should be considered. These systems will also require occasional maintenance to remove sediments which can be difficult depending on the design and access arrangements.

Cellular systems could be used to provide the majority of the required attenuation for the development. These can be used in conjunction with other systems, such as permeable paving. However, they do not offer any water quality improvements in isolation.

5.6.7 Tank or Culvert Storage

Hard engineered tank storage systems have traditionally been used for attenuation structures for the past decade and are often specified where large volumes of storage are required (>200m^3) and available space is an issue.

These systems have no inherent water treatment properties except potential sedimentation of the attenuated flow and offer no additional amenity benefits. In some cases, the easement to the tank or culvert is such that a significant portion of land area is sterilised from development as are certain types of landscape planting.

There are also significant costs associated with these systems in production, transportation, and installation. However, once installed the long-term maintenance requirement of the system is relatively low.

With a proven record of successful installation, tanks and culverts are regularly adopted by water authorities across the country, albeit with a large associated easement that will sterilise that portion of the site. It should be noted however, that these systems will require occasional maintenance to remove sediments which can be difficult depending on the design and access arrangements.

Tanks or culverts are not a preferred option for this development as they provide no water quality, biodiversity or amenity benefits.

5.6.8 Surface Storage

The use of roads, public areas and even landscaped areas as additional storage for an extreme rainfall event is becoming a widely accepted form of attenuation.

Water spilling from the drainage systems can be collected via roads and kerbs and channelled to lower lying areas where it would be stored until the capacity in the existing system returns.

These systems have the advantage of requiring little additional infrastructure merely detailing of the proposed roads and grassed areas.

As these systems will only by used in extreme events when the drainage system is exceeded (>1 in 30 years), they provide a very efficient way of catering for these events rather than providing permanent capacity.

There is no inherent water treatment capability in this system nor any particular increase in amenity, however, the costs associated with this provision are relatively small.

The topography of the site would permit the local attenuation of some surface water flows within the hardstanding play area in the south west of the site. This would be for events over 1 in 30-years only.

Careful detailing of the external level strategy is required if surface storage is to be safely mobilised. A decision should be made early in the design development if this is to be utilised.

5.6.9 Over Sized Pipework

It is often possible to provide the required volume of storage within the existing collection pipework of the proposed system. This may be incorporated by using oversized pipework designed to act as inline storage.

As the diameter of larger pipes readily available is limited the applicability of these types of systems is more suited to <200m^3 of attenuation. Above this volume, the length of pipe required is excessive and difficult to suitably fit into a normal site layout.

There is no intrinsic amenity provided by the use of this system neither is there any specific level of run-off treatment over and above that of a standard pipe and gully system.

However, due to their traditional nature, the adoption of these types of systems by water authorities is straightforward and does not require any specialist input. The pipes are generally available direct from suppliers with little or no lead in time and the satisfactory long-term performance of these systems is well documented. In this case it is unlikely that this option could be effectively used in isolation as it provides no water quality, amenity or biodiversity improvements. However, it could form part of a hybrid system to be used in conjunction with other forms of attenuation discussed above.

5.7 Runoff Quality

Receiving watercourses are sensitive to water quality in varying degrees. Discharges to ground and watercourses will require more treatment than to a public sewer.

In this case the system discharges into a watercourse and includes car parking and vehicle hardstanding areas as well as roof drainage. The receiving watercourse is classified as sensitive receptor and the runoff as low (roof) to medium (parking) pollutant potential.

Reference to the SuDS manual and the simplified index approach (Chapter 26) classifies the hardstanding runoff thus: -

Table 5.2: Pollution hazard indices for different land use classifications

Land use	Pollution hazard level	Total suspended solids (TSS)	Metals	Hydrocarbons
Other roofs (typically commercial/industrial roofs)	Low	0.3	0.2 (up to 0.8 where there is potential for metals to leach from the roof)	0.05
Commercial yard and delivery areas, non-residential car parking with frequent change (eg hospitals, retail), all roads except low traffic roads and trunk roads/motorways	Medium	0.7	0.6	0.7

Source: Table 26.2, CIRIA SuDS Manual C753 Table 26.2

5.8 SuDS Summary

The application of a SuDS based system needs to be considered as the primary measure for dealing with surface water for any proposals, these are the only systems that provide the required level of treatment, amenity and biodiversity net gain.

These systems as provided a relatively high-level of treatment of runoff, with reference to Table 26.3 of the SuDS Manual (C753), numbers in the table above show the indicative treatment level required.

Table 5.3: Indicative SuDS mitigation indices for discharges to surface waters

Land use	TSS	Metals	Hydrocarbons
Filter strip	0.4	0.4	0.5
Filter drain	0.4	0.4	0.4
Swale	0.5	0.6	0.6
Bioretention system	0.8	0.8	0.8
Permeable pavement	0.7	0.6	0.7
Detention basin	0.5	0.5	0.6
Pond	0.7	0.7	0.5
Wetland	0.8	0.8	0.8
Proprietary treatment systems	As assessed by suppliers		

Source: Table 26.2, CIRIA SuDS Manual C753

The application of permeable paving, a wetland or a bioretention system would provide the required level of treatment on their own. All other components for treatment of the car park and roof runoff would have to be used together in a treatment train.

Total SuDS mitigation index = mitigation index 1 + 0.5 (mitigation index2)

Where: mitigation index n = mitigation index for component n

5.9 Design Example

Based on the criteria noted previously and using a positive outfall to the watercourse at 68 l/s for the 1 in 100-year plus 40% climate change example, this would require approximate attenuation volumes of between 133m^3 and 238m^3.

This could be accommodated through SuDS options outlined in section 5.6, providing the overall system complies with runoff quality as outlined in section 5.7.

Collection and conveyance could be via a shallow swale or filter drain along access roads or the perimeter of paved areas.

This arrangement has no flooding for the design event. At detailed design stage surface storage may be permitted and the below ground volume reduced subject to coordination with the proposed external level strategy.

5.10 Exceedance Routing

The performance of the system during extreme events (>1 in 100-years) should also be considered at this stage.

The routing of potential storm water run-off, should the capacity of the proposed site drainage system be exceeded, needs to be built into the layout of the site such that the residual risk of flooding from this element can be easily mitigated or managed safely.

Based on the existing topography, flood water would runoff to the south into the watercourse.

5.11 System Maintenance

The whole of the existing drainage system is maintained as part of the existing estates management team for SRP Hempland Primary School.

The drainage systems have three main elements: the collection; attenuation and flow control. A typical maintenance regime for the example system is included in Appendix F.

5.12 Foul Drainage

A pre-development enquiry should be undertaken with Yorkshire Water to determine if there are any restrictions on the allowable foul flows from the site or any preferred points of connection to the adopted system.

It is noted that the Trust have reported that drainage issues are generally caused by grease back up from the kitchens, which despite cleaning regularly still backs up and causes issues.

It is proposed that the foul drainage is inspected regularly, with blockages cleared as required. Measures such as above ground grease traps from kitchen areas can help prevent issues, in addition to pipework designed with gradients in accordance with Building Regulations Part H.

Additionally, it is likely that the new building will be smaller than the old one and according to the RIBA Stage zero report will have less school children. Therefore, it will generate a smaller foul flow rate, thus the existing foul drainage which has a diameter of 150mm should suffice if properly maintained.

5.13 Flood Resilience and Resistance

The development of any site layout should always consider that the site is potentially at risk from an extreme event and as such the implementation of flood resilience and resistance is incorporated at this stage.

Relatively simple measures such as raising utility entry points, using first floor or ceiling down electrical circuits and sloping landscaping away from properties can be easily and economically incorporated into the development of the site.

The development should also consider the use of flood resilient construction in the building of the new units. This would include the use of solid floors, sealed door and window cavities, locating IT infrastructure at high-level and utility shut-off points.

More information can be found in the Communities and Local Government publication ‘Improving the Flood Performance of New Buildings’[9]

[9] Improving the Flood Performance of New Buildings (publishing.service.gov.uk)

6 Conclusions and Recommendations

The report concludes that the majority of the site is located in Flood Zone 1 with a small portion of the southern boundary adjacent to the watercourse which is in Flood Zone 3.

Therefore, the majority of the site can be considered to be of very low fluvial flood risk (<0.1% Annual Exceedance Probability) with the southern boundary by the watercourse to be of high fluvial flood risk (>1% Annual Exceedance Probability). It is also noted that according to the topographical survey that the watercourse is 0.45m lower than the lowest level of the sports pitch.

As the majority of the site including the existing school building and associated hard standing areas are shown to be wholly within Flood Zone 1 and outside the influence of any other local flood risk elements, in accordance with table 3 of the PPG it is concluded that the development is suitable for this location and the Sequential Test is deemed to have been passed.

The site has been shown to be safe from all other identified flood risks for the lifetime of the development. Additionally, it is estimated that the overall footprint of the development, post-construction will decrease by approximately 1,200m² and thus there will be a decrease in the runoff profile of the site.

As part of the development of the site and to reduce flood risk overall, it is proposed that the foul and surface water system remain segregated as per the existing site.

The use of Sustainable Drainage Systems (SuDS) should be considered as the primary means of collection, conveyance and control of surface water runoff from the site.

Based on a desktop assessment of the anticipated underlying ground conditions, infiltration is not considered likely to be viable, however this should be confirmed with soakaway tests and groundwater monitoring at a later stage.

It is noted that the existing site surface water discharges to the watercourse to the south of the development (Tang Hall Beck). It is expected that this connection can be reused by the new development. The allowable discharge rate should be restricted to 30% of the existing flow rate based on the proven drained impermeable area. It is estimated that the existing site discharges to the watercourse at a rate of 97l/s (based on 140l/s/ha), therefore the proposed development will need to restrict the discharge rate to no higher than 68l/s.

Further investigation work is required in the form of CCTV surveys and site-specific infiltration testing.

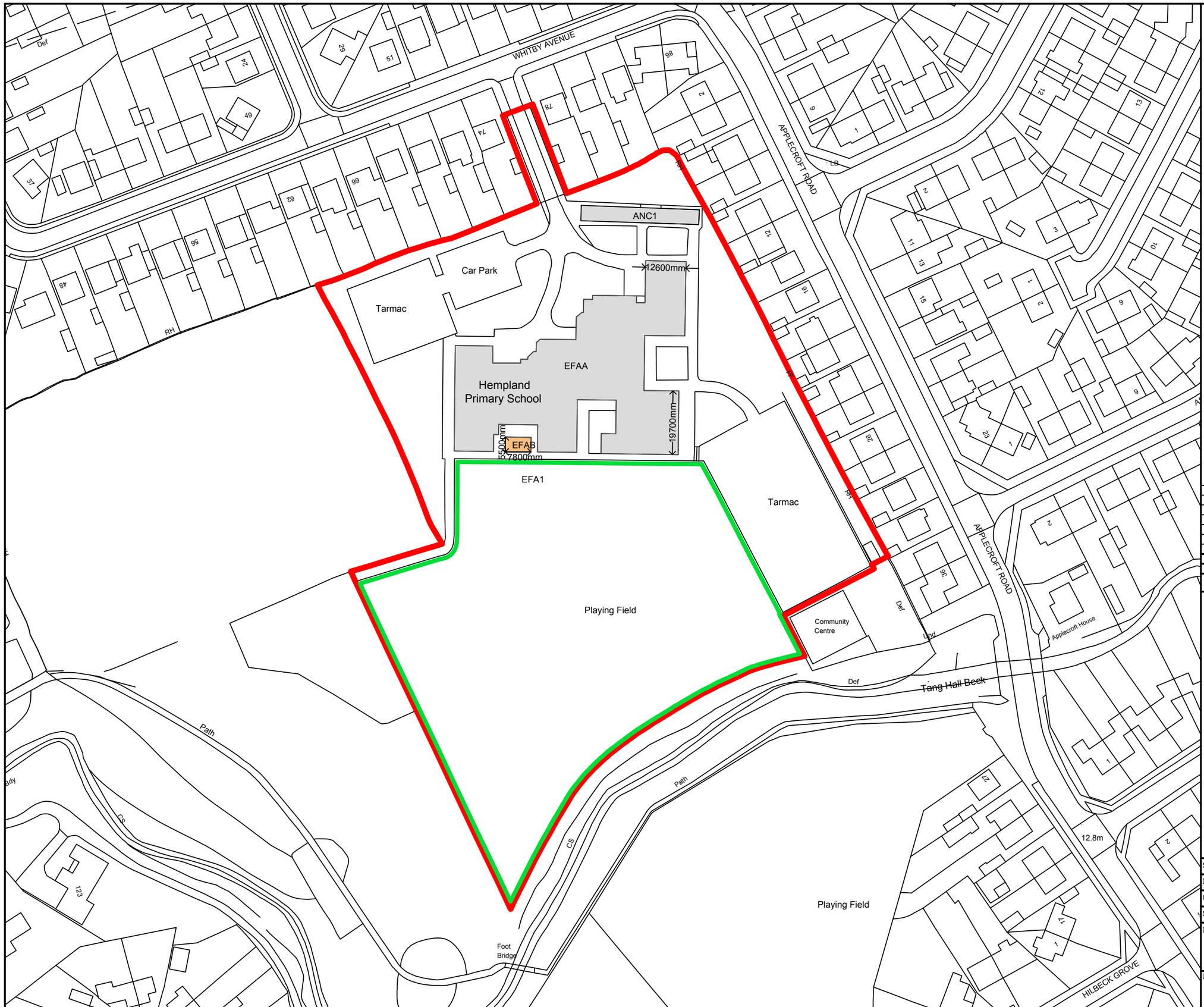
A range of SuDS features outlined in section 5.6 have been demonstrated to be viable with this outfall scenario with between 133m^3 and 238m^3 of attenuation required depending on the proven outfall restriction.

The new build is recommended to be constructed using flood resistant techniques and to be located to the north of the site.

Foul flows from the site will need to be evaluated and agreed with Yorkshire Water via a pre-development enquiry once accurate occupancy and staff numbers are known.

Appendices

A. Existing Site Layout



NOTES:

- School Site Boundary
- School Playing Field Boundary
- Separation of 2 adjoining blocks

18mm — Typical Block dimensions

EFA1	CDC Site Reference
EFAD	CDC Block Reference
ANC1	Ancillary Block Reference
Car Park, etc.	Annotation to specific areas

- Blocks - NEW
- Blocks - DEMOLISHED
- Blocks - EXISTING

Rev	Date	Description	Drn	Ch

Education & Skills Funding Agency

Education Funding Agency

CDC 17 - 19

SCHOOL:

142844
Hempland Primary Academy

Site Address

Whitby Avenue, Stockton Lane
York, North Yorkshire
YO13 1ET

Survey Organisation	CAPITA		
Drawn	K.TIBBS	Date	16JAN18
Checked	C.STEWART	Date	23JAN18
Scale:	NTS	Original Size:	A3

Document Staus:

FINAL

Drawing Number:	Revision:
142844-1 of 1	REV

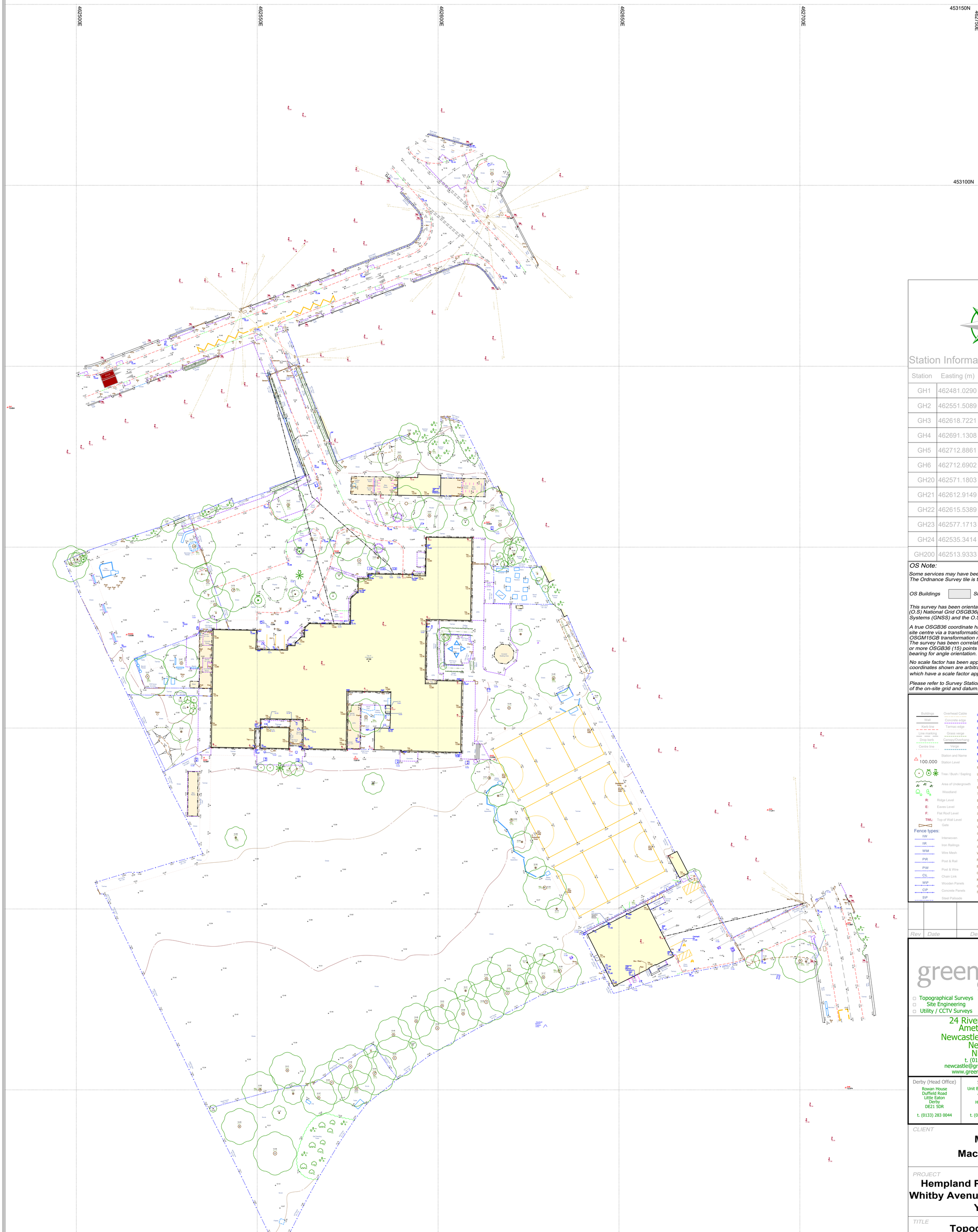
100mm on Original

Print Date: 25/02/2019 15:09:13

Z:\CDC CAD\Cad Capture\Cad Capture 6\Kerrys Folder\Jan Check list\142844 Hempland Primary Academy\142844 Hempland Primary Academy.dwg

B. Site Topographical Survey

462500E
462550E
462600E
462650E
462700E
462750E
453150N
453100N



N

Station Information:

Station	Easting (m)	Northing (m)	Level (m)
GH1	462481.0290	453038.6260	13.6540
GH2	462551.5089	453065.4505	13.5070
GH3	462618.7221	453091.7101	13.1890
GH4	462691.1308	452927.3569	11.9112
GH5	462712.8861	452895.8822	11.8974
GH6	462712.6902	452850.6039	12.9743
GH20	462571.1803	452998.2356	13.6360
GH21	462612.9149	453006.6518	13.5542
GH22	462615.5389	452941.2820	12.9296
GH23	462577.1713	452942.0057	13.6193
GH24	462535.3414	452941.7937	13.5973
GH200	462513.9333	452975.8115	13.6363

OS Note:

Some services may have been omitted due to parked vehicles. The Ordnance Survey tile is to be used as a guide only.

OS Buildings *Surveyed Buildings*

This survey has been orientated to the Ordnance Survey (O.S) National Grid OSGB36(15) via Global Navigational Satellite Systems (GNSS) and the O.S. Active Network (OS Net).

A true OSGB36 coordinate has been established near to the site centre via a transformation using the OSTN15GB & OSGM15GB transformation models.
The survey has been correlated to this point and a further one or more OSGB36 (15) points established to create a true O.S. bearing for angle orientation.

No scale factor has been applied to the survey therefore the coordinates shown are arbitrary & not true O.S. Coordinates which have a scale factor applied.

Please refer to Survey Station Table to enable establishment of the on-site grid and datum.

Legend:

Buildings, Wall, Kerb line, Line marking, Drop kerb, Centre line, Overhead Cable, Concrete edge, Tarmac edge, Grass verge, Canopy/Overhang, Verge, Station and Name, Station Level (1 / 100.000), Tree / Bush / Sapling, Area of Undergrowth, Woodland, R: Ridge Level, E: Eaves Level, F: Flat Roof Level, TWL: Top of Wall Level, Gate

Fence types: TW Interwoven, RR Iron Railings, WM Wire Mesh, PR Post & Rail, PW Post & Wire, CL Chain Link, WP Wooden Panels, CP Concrete Panels, SP Steel Palisade

IC	Inspection chamber	Bo	Bollard		
Pinv	Pipe invert	IB	Illuminated bollard		
Gy	Gully	Bin	Rubbish bin		
Bg	Back gully	Vp	Vent pipe		
Dp	Down pipe	Grl	Ground light		
Pipe	Pipe above ground	Lbox	Letter box		
MH	Manhole	Ldr	Ladder		
WL	Water level	Sty	Stile		
Fl	Flood light	IFL	Internal floor level		
Lp	Lamp post	THL	Threshold level		
Tp	Telegraph post	Sp	Sign post		
Ep	Electricity post	TH	Trialhole		
Tl	Traffic light	BH	Borehole		
Bus	Bus stop	ELC	Electric		
Sv	Stop valve	BT	British Telecom		
St	Stop tap	C'box	Control box		
Er	Earth rod	TT	Tactile		
Wm	Water meter	BP	Brick paved		
Gas	Gas valve	CPS	Concrete paving slabs		
Av	Air valve	CVR	Cover		
ICU	Undentified inspection	IC	Inspection chamber		
Wo	Wash out	R/wall	Retaining wall		
Re	Rodding eye	UTR	Unable to raise		
BB	Belisha beacon	TCL	Tree canopy level		
CTV	Cable tv	G:	Girth		
Mkr	Marker post	MG	Multi girth		
Gmkr	Gas marker post	Stmp	Tree Stump		
So	Soffit	CL:	Cover level		
		IL:	Invert level		

Rev	Date	Description	Drawn	Q. Ref

greenhatch group

- Topographical Surveys
- Site Engineering
- Utility / CCTV Surveys
- Measured Building Surveys
- 3D Laser Scanning
- Revit & BIM Models

24 Riverside Studios
Amethyst Road
Newcastle Business Park
Newcastle
NE4 7YL
t. (0191) 273 6391
newcastle@greenhatch-group.co.uk
www.greenhatch-group.co.uk

Derby (Head Office): Rowan House, Duffield Road, Little Eaton, Derby, DE21 5DR, t. (01133) 283 0044
St Albans: Unit B, The Courtyard, Alban Park, St Albans, Hertfordshire, AL4 0LA, t. (0172) 785 4481
London: 27 Cornwall Terrace Mews, Regents Park, London, NW1 5LL, t. (0207) 224 1806

CLIENT
Mott MacDonald

PROJECT
Hempland Primary School
Whitby Avenue, Stockton Lane
York

TITLE
Topographical Survey

SCALE	DATE
A1@ 1: 500	9.11.21
DRAWN	QUALITY REF
MT	GH12044

Level datum	See Notes
Grid orientation	See Notes
Job number	41967
Drawing No.	Rev.
41967_T	0

Comments
This plan should only be used for its original purpose. Greenhatch Group accepts no responsibility for this plan if supplied to any party other than the original client.
All dimensions should be checked on site prior to design and construction.
Drainage information (where applicable) has been visually inspected from the surface and therefore should be treated as approximate only.

Notes:

Copyright Greenhatch Group. 06/07/13

C. Underground Utilities Survey

N

NOTES;

UTILITY KEY

- ELECTRIC CABLE
- HV ELECTRIC CABLE
- EARTHING CABLE/STRAP
- ELECTRIC & COMMS CABLE
- TRAFFIC SIGNAL CABLE
- TELECOMS & COMMS CABLE
- TELECOMS CABLE
- CABLE TELEVISION
- COMMUNICATION CABLE
- WATER PIPE
- GAS PIPE
- FOUL DRAINAGE
- CONTAMINATED SURFACE DRAINAGE
- SURFACE DRAINAGE
- COMBINED DRAINAGE
- PUMPING MAIN
- FUEL PIPE
- LPG PIPE
- OFFSET FILL PIPE
- VENT PIPE
- GAUGE LINE
- HEATING PIPES
- UNIDENTIFIED SIGNAL
- UNIDENTIFIED GPR SIGNAL
- EMPTY DUCTS
- SERVICE DUCTS
- SURVEY BOUNDARY
- END OF TRACE

ABBREVIATIONS

AC	ASBESTOS CEMENT	MW	MONITORING WELL
AR	ASSUMED ROUTE	OH	OVERHEAD
BB	BASE BEND	OBA	OFF SURVEY AREA
BD	BACKDROP	PE	POLYETHYLENE
BH	BOREHOLE	PL	PLASTIC
BR	BRICK	PO	POWER
CI	CAST IRON	PVC	POLYVINYL CHLORIDE
CL	COVER LEVEL	RE	RODDING EYE
CO	CONCRETE	RWP	RAIN WATER PIPE
CR	CABLE RISER	SIA	SOAKAWAY
CP	CATCHPIT	SI	SPUN IRON
DI	DUCTILE IRON	ST	STOP TAP
ED	END OF DUCT	S.T	STEEL
ED1	EMPTY DUCT	SV	SLUICE VALVE
EOSC	END OF TRENCH SCAR	SVP	SOIL VENT PIPE
EOT	END OF TRACE	TE	TRAPPED EXIT
ER	EARTHING ROD	TFR	TAKEN FROM RECORD
EP	ELECTRICITY POLE	TL	TRAFFIC LIGHT
FH	FIRE HYDRANT	TP	TELEGRAPH POLE
Gy	GULLY	UTCCTV	UNABLE TO CCTV
GPR	GROUND PENETRATING RADAR	UTE	UNABLE TO ENTER
GRP	GLASS REINFORCED PLASTIC	UTL	UNABLE TO LIFT
GV	GAS VALVE	UTS	UNABLE TO SURVEY
HL	HIGH LEVEL	VC	VITRIFIED CLAY
HOR	HEAD OF RUN	VP	VENT PIPE
IC	INSPECTION CHAMBER	VR	VAPOUR RECOVERY
IL	INVERT LEVEL	WL	WATER LEVEL
LP	LAMP POST	WM	WATER METER
MH	MANHOLE	WO	WASH OUT VALVE
SWS	SURFACE WATER SEWER		
FWS	FOUL WATER SEWER		
CWS	COMBINED WATER SEWER		

DISCLAIMER

THE UTILITY SURVEY HAS BEEN CARRIED OUT IN ACCORDANCE WITH A PAS 128_2014 M^ SPECIFICATION.
ELECTRO-MAGNETIC TECHNIQUES AND/OR GROUND PENETRATING RADAR HAVE BEEN USED TO TRACE THE POSITION OF UNDERGROUND SERVICES. THE RESULTS ARE NOT INFALLIBLE AND TRIAL EXCAVATIONS SHOULD BE CARRIED OUT TO CONFIRM SERVICE IDENTIFICATION, POSITIONS AND PARTICULARLY DEPTHS, WHERE THESE ARE CRITICAL. ALTHOUGH ALL REASONABLE EFFORT HAS BEEN MADE IN SEARCHING AVAILABLE RECORD DRAWINGS, THE COMPLETENESS OF THE UNDERGROUND SERVICES INFORMATION CANNOT BE GUARANTEED. THE METHOD OF SURVEY DOES NOT DIFFERENTIATE BETWEEN LIVE AND DEAD SERVICES AND AS SUCH ALL SERVICES SHOULD BE TREATED AS LIVE.
WHERE SERVICES ARE NON-METALLIC POSITIONS MAY BE TAKEN FROM RECORDS,TRENCH SCARS & SURFACE DETAIL.
WHERE QUOTED, DEPTH ESTIMATIONS ARE GENERALLY TO THE CENTRE OF THE SERVICE. DEPTHS TO GRAVITY SEWERS AND DRAINS ARE GENERALLY TO INVERT LEVELS UNLESS OTHERWISE STATED.
PIPE SIZES WHICH CANNOT BE OBTAINED BY VISUAL SURVEY ARE TAKEN FROM RECORD DRAWINGS OR MARKER PLATES WHERE AVAILABLE.
WHERE GROUND PENETRATING RADAR HAS BEEN USED IT WILL PREDOMINANTLY BE USED TO IDENTIFY UNDERGROUND UTILITIES.
IF POSSIBLE WE WILL ALSO IDENTIFY UNDERGROUND STRUCTURES/ TANKS ETC. BUT CANNOT GUARANTEE TO HAVE LOCATED ALL SUCH ITEMS
THE USE OF RADAR CAN BE LIMITED BOTH BY SURFACE CONDITIONS AND ALSO BY SOIL TYPE. DEPTH ESTIMATES WOULD NOT NORMALLY BE PROVIDED FOR SERVICES LOCATED WITH GPR.

Rev	Date	Description	Drawn	Q. Ref.

greenhatch group

- Topographical Surveys
- Measured Building Surveys
- Site Engineering
- 3D Laser Scanning
- Utility / CCTV Surveys
- Revit & BIM Models

24 Riverside Studios
Amethyst Road
Newcastle Business Park
Newcastle
NE4 7YL
t. (0191) 273 6391
newcastle@greenhatch-group.co.uk
www.greenhatch-group.co.uk

Derby (Head Office)	St Albans	London
Rowan House Duffield Road Little Eaton Derby DE21 5DR	Unit 8, The Courtyard Alban Park St Albans Hertfordshire AL4 0LA	27 Cornwall Terrace Mews Regents Park London NW1 5LL
t. (0133) 283 0044	t. (0172) 785 4481	t. (0207) 224 1806

CLIENT
Mott MacDonald

PROJECT
Hempland Primary School
Whitby Avenue, Stockton Lane
York

TITLE
Underground
PAS 128 Utility Survey

SCALE	DATE
A1@ 1: 200	08-10.11.21
DRAWN	QUALITY REF
SL/TP	14517

Level datum
Grid orientation
Job number 41967

Drawing No. 41967_UG_1 Rev. 0

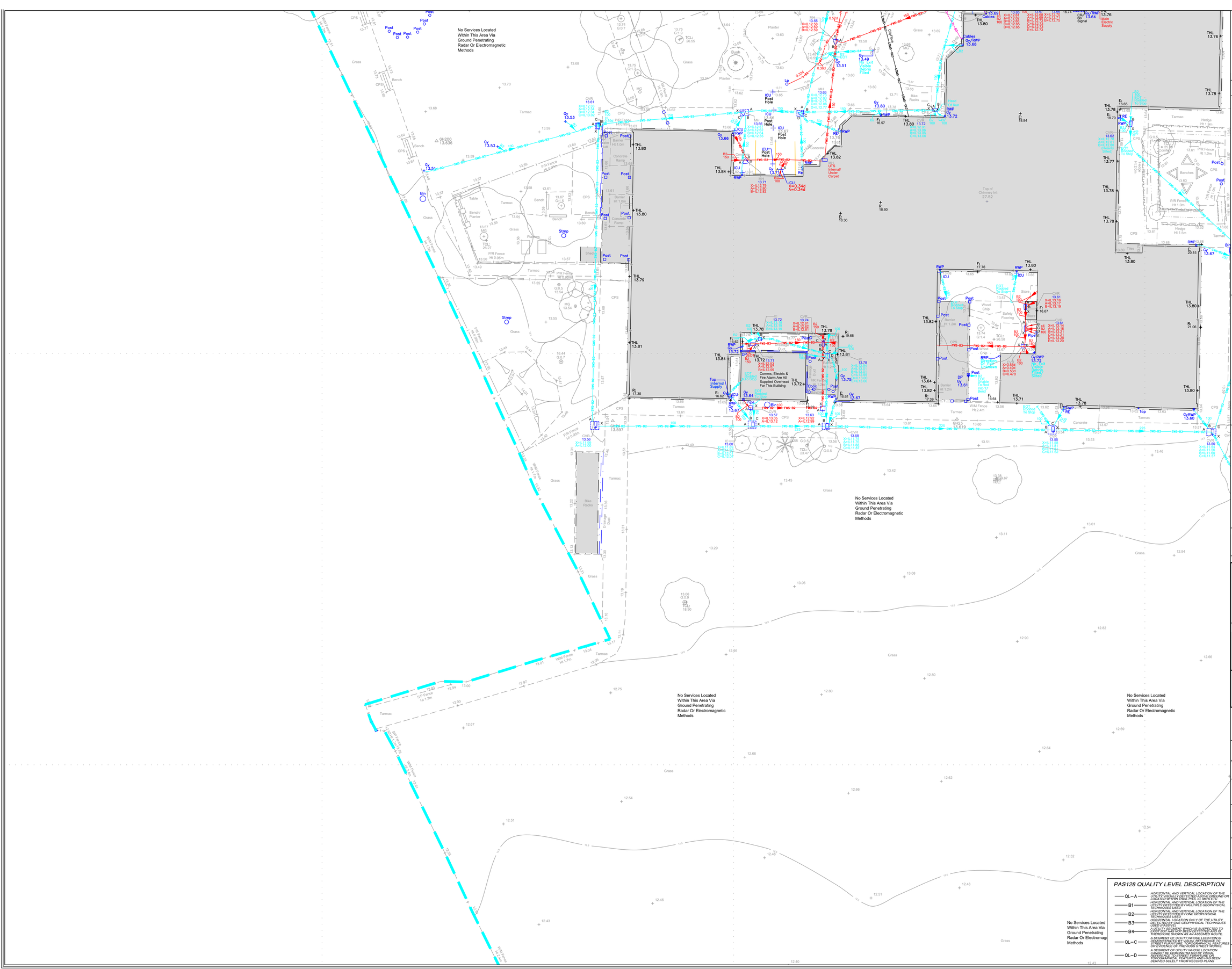
PAS128 QUALITY LEVEL DESCRIPTION

- QL – A — HORIZONTAL AND VERTICAL LOCATION OF THE UTILITY DETECTED BY MULTIPLE GEOPHYSICAL AND/OR WITHIN TRIAL PITS. AT MAPS ETC.
- QL – B1 — HORIZONTAL AND VERTICAL LOCATION OF THE UTILITY DETECTED BY MULTIPLE GEOPHYSICAL TECHNIQUES USED.
- QL – B2 — HORIZONTAL AND VERTICAL LOCATION OF THE UTILITY DETECTED BY ONE GEOPHYSICAL TECHNIQUES USED.
- QL – B3 — HORIZONTAL LOCATION ONLY OF THE UTILITY DETECTED BY ONE GEOPHYSICAL TECHNIQUES USED. DEPTH UNKNOWN.
- QL – B4 — A UTILITY SEGMENT WHICH IS SUSPECTED TO EXIST BUT HAS NOT BEEN DETECTED, AND IS THEREFORE SHOWN AS AN ASSUMED ROUTE.
- QL – C — A SEGMENT OF UTILITY WHICH EXISTENCE IS INFERRED FROM VISIBLE SURFACE FEATURES OR STREET FURNITURE, TOPOGRAPHICAL FEATURES OR EVIDENCE OF PREVIOUS STREET WORKS.
- QL – D — A SEGMENT OF UTILITY WHOSE LOCATION CANNOT BE RECONCILED WITH VISIBLE SURFACE FEATURES, STREET FURNITURE, TOPOGRAPHICAL FEATURES AND HAS BEEN DERIVED SOLELY FROM RECORD PLANS

Comments
This plan should only be used for its original purpose. Greenhatch Group accepts no responsibility for this plan if supplied to any party other than the original client.
All dimensions should be checked on site prior to design and construction.
Drainage information (where applicable) has been visually inspected from the surface and therefore should be treated as approximate only.

Notes:

©Copyright Greenhatch Group. 06/07/13



N

NOTES;

UTILITY KEY

- ELECTRIC CABLE
- HV ELECTRIC CABLE
- EARTHING CABLE/STRAP
- ELECTRIC & COMMS CABLE
- TRAFFIC SIGNAL CABLE
- TELECOMS & COMMS CABLE
- TELECOMS CABLE
- CABLE TELEVISION
- COMMUNICATION CABLE
- WATER PIPE
- GAS PIPE
- FOUL DRAINAGE
- CONTAMINATED SURFACE DRAINAGE
- SURFACE DRAINAGE
- COMBINED DRAINAGE
- PUMPING MAIN
- FUEL PIPE
- LPG PIPE
- OFFSET FILL PIPE
- VENT PIPE
- GAUGE LINE
- HEATING PIPES
- UNIDENTIFIED SIGNAL
- UNIDENTIFIED GPR SIGNAL
- EMPTY DUCTS
- SERVICE DUCTS
- SURVEY BOUNDARY
- END OF TRACE

ABBREVIATIONS

AC	ASBESTOS CEMENT	MW	MONITORING WELL
AR	ASSUMED ROUTE	OH	OVERHEAD
BB	BASE BEND	OBA	OFF SURVEY AREA
BD	BACKDROP	PE	POLYETHYLENE
BH	BOREHOLE	PL	PLASTIC
BR	BRICK	PO	POLYPROPYLENE
CI	CAST IRON	PVC	POLYVINYL CHLORIDE
CL	COVER LEVEL	RE	RODDING EYE
CO	CONCRETE	RWP	RAIN WATER PIPE
CR	CABLE RISER	SIA	SOMAIAWAY
CP	CATCHPIT	SI	SPUN IRON
DI	DUCTILE IRON	ST	STOP TAP
EB	ELECTRIC BOX	S.T	STEEL
ED	EMPTY DUCT	SV	SLUICE VALVE
EOSC	END OF TRENCH SCAR	SVP	SOIL VENT PIPE
EOT	END OF TRACE	TE	TRAPPED EXIT
ER	EARTHING ROD	TFR	TAKEN FROM RECORD
EP	ELECTRICITY POLE	TL	TRAFFIC LIGHT
FH	FIRE HYDRANT	TP	TELEGRAPH POLE
Gy	GULLY	UCTV	UNABLE TO CCTV
GPR	GROUND PENETRATING RADAR	UTE	UNABLE TO ENTER
GRP	GLASS REINFORCED PLASTIC	UTL	UNABLE TO LIFT
GV	GAS VALVE	UTS	UNABLE TO SURVEY
HL	HIGH LEVEL	VC	VITRIFIED CLAY
HOR	HEAD OF RUN	VP	VENT PIPE
IC	INSPECTION CHAMBER	VR	VAPOUR RECOVERY
IL	INVERT LEVEL	WL	WATER LEVEL
LP	LAMP POST	WM	WATER METER
MH	MANHOLE	WO	WASH OUT VALVE
SWS	SURFACE WATER SEWER		
FWS	FOUL WATER SEWER		
CWS	COMBINED WATER SEWER		

DISCLAIMER

THE UTILITY SURVEY HAS BEEN CARRIED OUT IN ACCORDANCE WITH A PAS 128_2014 6TH SPECIFICATION.
ELECTRO-MAGNETIC TECHNIQUES AND/OR GROUND PENETRATING RADAR (GPR) HAVE BEEN USED TO TRACE UNDERGROUND UTILITIES WHERE THE RESULTS ARE NOT INFALLIBLE AND TRIAL EXCAVATIONS SHOULD BE CARRIED OUT TO CONFIRM SERVICE IDENTIFICATION, POSITIONS AND PARTICULARLY DEPTHS, WHERE THESE ARE CRITICAL. ALTHOUGH ALL REASONABLE EFFORT HAS BEEN MADE IN SEARCHING AVAILABLE RECORD DRAWINGS, THE COMPLETENESS OF THE UNDERGROUND SERVICES INFORMATION CANNOT BE GUARANTEED. THE METHOD OF SURVEY DOES NOT ALWAYS DETECT ALL BURIED SERVICES AND AS SUCH ALL SERVICES SHOULD BE TREATED AS LIVE.
WHERE SERVICES ARE NON-METALLIC POSITIONS MAY BE TAKEN FROM RECORDS,TRENCH SCARS & SURFACE DETAIL.
WHERE QUOTED, DEPTH ESTIMATIONS ARE GENERALLY TO THE CENTRE OF THE SERVICE. DEPTHS TO GRAVITY SEWERS AND DRAINS ARE GENERALLY TO INVERT LEVELS UNLESS OTHERWISE STATED.
PIPE SIZES WHICH CANNOT BE OBTAINED BY VISUAL SURVEY ARE TAKEN FROM RECORD DRAWINGS OR MARKER PLATES WHERE AVAILABLE.
WHERE GROUND PENETRATING RADAR HAS BEEN USED IT WILL PRIMARILY HAVE BEEN TO IDENTIFY UNDERGROUND UTILITIES
IF POSSIBLE WE WILL ALSO IDENTIFY UNDERGROUND STRUCTURES/ TANKS ETC. BUT CANNOT GUARANTEE TO HAVE LOCATED ALL SUCH ITEMS
THE USE OF RADAR CAN BE LIMITED BOTH BY SURFACE CONDITIONS AND ALSO BY SOIL TYPE. DEPTH ESTIMATES WOULD NOT NORMALLY BE PROVIDED FOR SERVICES LOCATED WITH GPR.

Rev	Date	Description	Drawn	Q. Ref.

greenhatch group

- Topographical Surveys
- Site Engineering
- Utility / CCTV Surveys
- Measured Building Surveys
- 3D Laser Scanning
- Revit & BIM Models

24 Riverside Studios
Amethyst Road
Newcastle Business Park
Newcastle
NE4 7YL
t. (0191) 273 6391
newcastle@greenhatch-group.co.uk
www.greenhatch-group.co.uk

Derb (Head Office): Rowan House, Duffield Road, Little Eaton, Derby, DE21 5DR, t. (0133) 283 0044
St Albans: Unit B, The Courtyard, Alban Park, St Albans, Hertfordshire, AL4 0LA, t. (0172) 785 4481
London: 27 Cornwall Terrace Mews, Regents Park, London, NW1 5LL, t. (0207) 224 1806

CLIENT
Mott MacDonald

PROJECT
Hempland Primary School
Whitby Avenue, Stockton Lane
York

TITLE
Underground
PAS 128 Utility Survey

SCALE	DATE
A1@ 1: 200	08-10.11.21
DRAWN: SL/TP	QUALITY REF: 14517
Level datum	
Grid orientation	
Job number: 41967	

Drawing No.: 41967_UG_2 — Rev.: 0

PAS128 QUALITY LEVEL DESCRIPTION

QL – A	HORIZONTAL AND VERTICAL LOCATION OF THE UTILITY DETECTED BY MULTIPLE GEOPHYSICAL AND OR LOCATED WITHIN TRIAL PITS, ET. MAY2 ETC.
B1	HORIZONTAL AND VERTICAL LOCATION OF THE UTILITY DETECTED BY MULTIPLE GEOPHYSICAL TECHNIQUES USED.
B2	HORIZONTAL AND VERTICAL LOCATION OF THE UTILITY DETECTED BY ONE GEOPHYSICAL TECHNIQUES USED.
B3	HORIZONTAL LOCATION ONLY OF THE UTILITY DETECTED BY ONE GEOPHYSICAL TECHNIQUES USED AND BY LINE.
B4	A UTILITY SEGMENT WHICH IS SUSPECTED TO EXIST BUT HAS NOT BEEN DETECTED, AND IS THEREFORE SHOWN AS AN ASSUMED ROUTE.
QL – C	A SEGMENT OF UTILITY WHOSE LOCATION IS DERIVED FROM RECORDS AND/OR VISIBLE STREET FURNITURE, TOPOGRAPHICAL FEATURES OR EVIDENCE OF PREVIOUS STREET WORKS.
QL – D	A SEGMENT OF UTILITY WHOSE LOCATION CANNOT BE REASONABLY VERIFIED USING GEOPHYSICAL TECHNIQUES, VISIBLE STREET FURNITURE, TOPOGRAPHICAL FEATURES AND HAS BEEN DERIVED SOLELY FROM RECORD PLANS

Comments
This plan should only be used for its original purpose. Greenhatch Group accepts no responsibility for this plan if supplied to any party other than the original client.
All dimensions should be checked on site prior to design and construction.
Drainage information (where applicable) has been visually inspected from the surface and therefore should be treated as approximate only.

Notes:

© Copyright Greenhatch Group, 06/07/13

N

NOTES;

UTILITY KEY

- ELECTRIC CABLE
- HV ELECTRIC CABLE
- EARTHING CABLE/STRAP
- ELECTRIC & COMMS CABLE
- TRAFFIC SIGNAL CABLE
- TELECOMS & COMMS CABLE
- TELECOMS CABLE
- CABLE TELEVISION
- COMMUNICATION CABLE
- WATER PIPE
- GAS PIPE
- FOUL DRAINAGE
- CONTAMINATED SURFACE DRAINAGE
- SURFACE DRAINAGE
- COMBINED DRAINAGE
- PUMPING MAIN
- FUEL PIPE
- LPG PIPE
- OFFSET FILL PIPE
- VENT PIPE
- GAUGE LINE
- HEATING PIPES
- UNIDENTIFIED SIGNAL
- UNIDENTIFIED GPR SIGNAL
- EMPTY DUCTS
- SERVICE DUCTS
- SURVEY BOUNDARY
- END OF TRACE

ABBREVIATIONS

AC	ASBESTOS CEMENT	MW	MONITORING WELL
AR	ASSUMED ROUTE	OH	OVERHEAD
BB	BASE BEND	OSA	OFF SURVEY AREA
BD	BACKDROP	PE	POLYETHYLENE
BH	BOREHOLE	PL	PLASTIC
BR	BRICK	PO	POST OFFICE
CI	CAST IRON	PVC	POLYVINYL CHLORIDE
CL	COVER LEVEL	RE	RODDING EYE
CO	CONCRETE	RWP	RAIN WATER PIPE
CR	CABLE RISER	SIA	SOMAIWAY
CP	CATCHPIT	SI	SPUN IRON
DI	DUCTILE IRON	ST	STOP TAP
EB	ELECTRIC BOX	S.T	STEEL
ED	EMPTY DUCT	SV	SLUICE VALVE
EOSC	END OF TRENCH SCAR	SVP	SOIL VENT PIPE
EOT	END OF TRACE	TE	TRAPPED EXIT
ER	EARTHING ROD	TFR	TAKEN FROM RECORD
EP	ELECTRICITY POLE	TL	TRAFFIC LIGHT
FH	FIRE HYDRANT	TP	TELEGRAPH POLE
Gy	GULLY	UTCCTV	UNABLE TO CCTV
GPR	GROUND PENETRATING RADAR	UTE	UNABLE TO ENTER
GRP	GLASS REINFORCED PLASTIC	UTL	UNABLE TO LIFT
GV	GAS VALVE	UTS	UNABLE TO SURVEY
HL	HIGH LEVEL	VC	VITRIFIED CLAY
HOR	HEAD OF RUN	VP	VENT PIPE
IC	INSPECTION CHAMBER	VR	VAPOUR RECOVERY
IL	INVERT LEVEL	WL	WATER LEVEL
LP	LAMP POST	WM	WATER METER
MH	MANHOLE	WO	WASH OUT VALVE
SWS	SURFACE WATER SEWER		
FWS	FOUL WATER SEWER		
CWS	COMBINED WATER SEWER		

DISCLAIMER

THE UTILITY SURVEY HAS BEEN CARRIED OUT IN ACCORDANCE WITH A PAS 128_2014 ST^H SPECIFICATION.
ELECTRO-MAGNETIC TECHNIQUES AND/OR GROUND PENETRATING RADAR HAVE BEEN USED TO TRACE THE POSITION OF UNDERGROUND PIPES. THE RESULTS ARE NOT INFALLIBLE AND TRIAL EXCAVATIONS SHOULD BE CARRIED OUT TO CONFIRM SERVICE IDENTIFICATION, POSITIONS AND PARTICULARLY DEPTHS, WHERE THESE ARE CRITICAL. ALTHOUGH ALL REASONABLE EFFORT HAS BEEN MADE IN SEARCHING AVAILABLE RECORD DRAWINGS, THE COMPLETENESS OF THE UNDERGROUND SERVICES INFORMATION CANNOT BE GUARANTEED. THE METHOD OF SURVEY DOES NOT DIFFERENTIATE BETWEEN LIVE AND DEAD SERVICES AND AS SUCH ALL SERVICES SHOULD BE TREATED AS LIVE.
WHERE SERVICES ARE NON-METALLIC POSITIONS MAY BE TAKEN FROM RECORDS, TRENCH SCARS & SURFACE DETAIL.
WHERE QUOTED, DEPTH ESTIMATIONS ARE GENERALLY TO THE CENTRE OF THE SERVICE. DEPTHS TO GRAVITY SEWERS AND DRAINS ARE GENERALLY TO INVERT LEVELS UNLESS OTHERWISE STATED.
PIPE SIZES WHICH CANNOT BE OBTAINED BY VISUAL SURVEY ARE TAKEN FROM RECORD DRAWINGS OR MARKER PLATES WHERE GIVEN.
WHERE GROUND PENETRATING RADAR HAS BEEN USED IT WILL PRIMARILY HAVE BEEN TO IDENTIFY UNDERGROUND UTILITIES IF POSSIBLE WE WILL ALSO IDENTIFY UNDERGROUND STRUCTURES/ TANKS ETC. BUT CANNOT GUARANTEE TO HAVE LOCATED ALL SUCH ITEMS THE USE OF RADAR CAN BE LIMITED BOTH BY SURFACE CONDITIONS AND ALSO BY SOIL TYPE. DEPTH ESTIMATES WOULD NOT NORMALLY BE PROVIDED FOR SERVICES LOCATED WITH GPR.

Rev	Date	Description	Drawn	Q. Ref

greenhatch group

- Topographical Surveys
- Site Engineering
- Utility / CCTV Surveys
- Measured Building Surveys
- 3D Laser Scanning
- Revit & BIM Models

24 Riverside Studios
Amethyst Road
Newcastle Business Park
Newcastle
NE4 7YL
t. (0191) 273 6391
newcastle@greenhatch-group.co.uk
www.greenhatch-group.co.uk

Derby (Head Office)	St Albans	London
Rowan House Duffield Road Little Eaton Derby DE21 5DE t. (0133) 283 0044	Unit B, The Courtyard Alban Park St Albans Hertfordshire AL4 0LA t. (0172) 785 4481	27 Cornwall Terrace Mews Regents Park London NW1 5LL t. (0207) 224 1806

CLIENT
Mott MacDonald

PROJECT
Hempland Primary School
Whitby Avenue, Stockton Lane
York

TITLE
Underground PAS 128 Utility Survey

SCALE	DATE
A1@ 1: 200	08-10.11.21
DRAWN	QUALITY REF
SL/TP	14517
Level datum	
Grid orientation	
Job number	41967
Drawing No.	Rev.
41967_UG_3	0

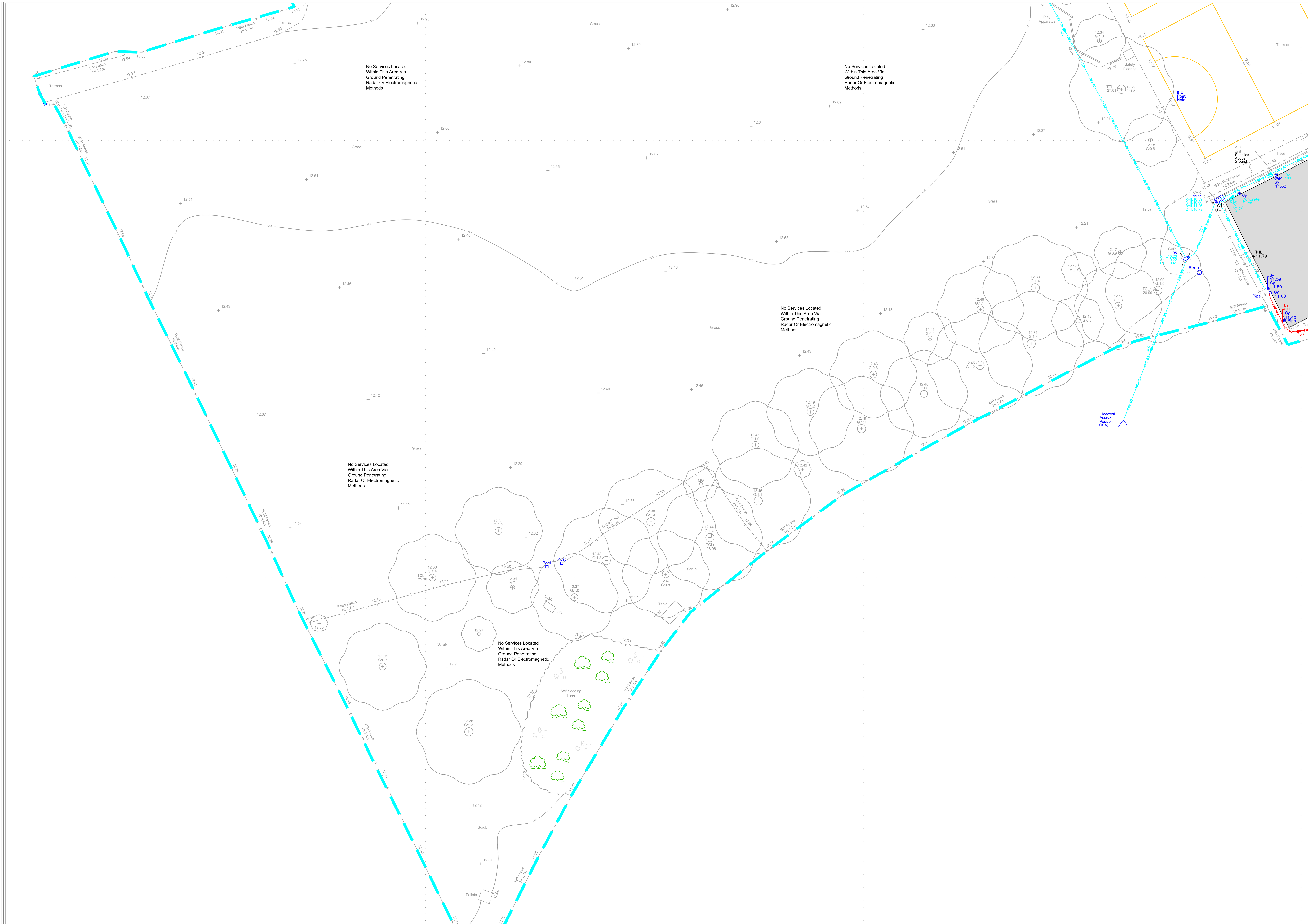
Comments
This plan should only be used for its original purpose. Greenhatch Group accepts no responsibility for this plan if supplied to any party other than the original client.
All dimensions should be checked on site prior to design and construction.
Drainage information (where applicable) has been visually inspected from the surface and therefore should be treated as approximate only.

Notes:

PAS128 QUALITY LEVEL DESCRIPTION

- QL–A — HORIZONTAL AND VERTICAL LOCATION OF THE UTILITY VISUALLY DETECTED ABOVE GROUND OR LOCATED WITHIN TRIAL PITS, IC, MHS ETC
- B1 — HORIZONTAL AND VERTICAL LOCATION OF THE UTILITY DETECTED BY MULTIPLE GEOPHYSICAL TECHNIQUES USED
- B2 — HORIZONTAL AND VERTICAL LOCATION OF THE UTILITY DETECTED BY ONE GEOPHYSICAL TECHNIQUES USED
- B3 — HORIZONTAL LOCATION ONLY OF THE UTILITY DETECTED BY ONE OR MORE GEOPHYSICAL TECHNIQUES USED (PASSIVE)
- B4 — *A UTILITY SEGMENT WHICH IS SUSPECTED TO EXIST BUT NOT DETECTED BY SURVEY AND IS THEREFORE SHOWN AS AN ASSUMED ROUTE.*
- QL–C — *A SEGMENT OF UTILITY WHOSE LOCATION IS DEMONSTRATED BY VISUAL REFERENCE TO STREET FURNITURE, TOPOGRAPHICAL FEATURES OR EVIDENCE OF PREVIOUS STREET WORKS*
- QL–D — *A SEGMENT OF UTILITY WHOSE LOCATION CANNOT BE DEMONSTRATED BY VISUAL REFERENCE TO STREET FURNITURE OR TOPOGRAPHICAL FEATURES AND HAS BEEN DERIVED SOLELY FROM RECORD PLANS*

©copyright Greenhatch Group. 06/07/13



NOTES;

UTILITY KEY

Symbol	Description
∿	ELECTRIC CABLE
HV	HV ELECTRIC CABLE
ER	EARTHING CABLE/STRAP
∿- COMS	ELECTRIC & COMMS CABLE
TS	TRAFFIC SIGNAL CABLE
COM	TELECOMS & COMMS CABLE
:	TELECOMS CABLE
TV	CABLE TELEVISION
COMS	COMMUNICATION CABLE
W	WATER PIPE
G	GAS PIPE
FWS	FOUL DRAINAGE
CSWS	CONTAMINATED SURFACE DRAINAGE
SWS	SURFACE DRAINAGE
CWS	COMBINED DRAINAGE
	PUMPING MAIN
F	FUEL PIPE
LPG	LPG PIPE
OF	OFFSET FILL PIPE
V	VENT PIPE
G	GAUGE LINE
H	HEATING PIPES
UI	UNIDENTIFIED SIGNAL
UI	UNIDENTIFIED GPR SIGNAL
ED	EMPTY DUCTS
	SERVICE DUCTS
	SURVEY BOUNDARY
)	END OF TRACE

ABBREVIATIONS

AC	ASBESTOS CEMENT	MW	MONITORING WELL
AR	ASSUMED ROUTE	OH	OVERHEAD
BB	BASE BEND	OSA	OFF SURVEY AREA
BD	BACKDROP	PE	POLYETHYLENE
BH	BOREHOLE	PL	PLASTIC
BR	BRICK	PR	PIPE RISER
CI	CAST IRON	PVC	POLYVINYL CHLORIDE
CL	COVER LEVEL	RE	RODDING EYE
CO	CONCRETE	RWP	RAIN WATER PIPE
CR	CABLE RISER	S/A	SOAKAWAY
CP	CATCHPIT	SI	SPUN IRON
DI	DUCTILE IRON	ST	STOP TAP
DP	DOWN PIPE	S.T	STEEL
ED	EMPTY DUCT	SV	SLUICE VALVE
EOSC	END OF TRENCH SCAR	SVP	SOIL VENT PIPE
EOT	END OF TRACE	TE	TRAPPED EXIT
ER	EARTHING ROD	TFR	TAKEN FROM RECORD
EP	ELECTRICITY POLE	TL	TRAFFIC LIGHT
FH	FIRE HYDRANT	TP	TELEGRAPH POLE
Gy	GULLY	UTCCTV	UNABLE TO CCTV
GPR	GROUND PENETRATING RADAR	UTF	UNABLE TO FIND
GRP	GLASS REINFORCED PLASTIC	UTL	UNABLE TO LIFT
GV	GAS VALVE	UTS	UNABLE TO SURVEY
HL	HIGH LEVEL	VC	VITRIFIED CLAY
HOR	HEAD OF RUN	VP	VENT PIPE
IC	INSPECTION CHAMBER	VR	VAPOUR RECOVERY
IL	INVERT LEVEL	WL	WATER LEVEL
LP	LAMP POST	WM	WATER METER
MH	MANHOLE	WO	WASH OUT VALVE
SWS	SURFACE WATER SEWER		
FWS	FOUL WATER SEWER		
CWS	COMBINED WATER SEWER		

DISCLAIMER

*THE UTILITY SURVEY HAS BEEN CARRIED OUT IN ACCORDANCE WITH A PAS 128_2014 M** SPECIFICATION.*
ELECTRO-MAGNETIC TECHNIQUES AND/OR GROUND PENETRATING RADAR HAVE BEEN USED IN THE LOCATION OF UNDERGROUND SERVICES
THE RESULTS ARE NOT INFALLIBLE AND TRIAL EXCAVATIONS SHOULD BE CARRIED OUT TO CONFIRM SERVICE IDENTIFICATION, POSITIONS AND PARTICULARLY DEPTHS, WHERE THESE ARE CRITICAL. ALTHOUGH ALL REASONABLE EFFORT HAS BEEN MADE IN SEARCHING AVAILABLE RECORD DRAWINGS, THE COMPLETENESS OF THE UNDERGROUND SERVICES INFORMATION CANNOT BE GUARANTEED. THE METHOD OF SURVEY DOES NOT DIFFERENTIATE BETWEEN LIVE AND DEAD SERVICES AND AS SUCH ALL SERVICES SHOULD BE TREATED AS LIVE.
WHERE SERVICES ARE NON-METALLIC POSITIONS MAY BE TAKEN FROM RECORDS,TRENCH SCARS & SURFACE DETAIL.
WHERE QUOTED, DEPTH ESTIMATIONS ARE GENERALLY TO THE CENTRE OF THE SERVICE. DEPTHS TO GRAVITY SEWERS AND DRAINS ARE GENERALLY TO INVERT LEVELS UNLESS OTHERWISE STATED.
PIPE SIZES WHICH CANNOT BE OBTAINED BY VISUAL SURVEY ARE TAKEN FROM RECORD DRAWINGS OR MARKER PLATES WHERE AVAILABLE.
WHERE GROUND PENETRATING RADAR HAS BEEN USED IT WILL PRIMARILY HAVE BEEN TO IDENTIFY UNDERGROUND UTILITIES IF POSSIBLE WE WILL ALSO IDENTIFY UNDERGROUND STRUCTURES/ TANKS ETC. BUT CANNOT GUARANTEE TO HAVE LOCATED ALL SUCH ITEMS THE USE OF RADAR CAN BE LIMITED BOTH BY SURFACE CONDITIONS AND ALSO BY SOIL TYPE. DEPTH ESTIMATES WOULD NOT NORMALLY BE PROVIDED FOR SERVICES LOCATED WITH GPR.

Rev	Date	Description	Drawn	Q. Ref.

greenhatch group

- Topographical Surveys
- Site Engineering
- Utility / CCTV Surveys
- Measured Building Surveys
- 3D Laser Scanning
- Revit & BIM Models

24 Riverside Studios
Amethyst Road
Newcastle Business Park
Newcastle
NE4 7YL
t. (0191) 273 6391
newcastle@greenhatch-group.co.uk
www.greenhatch-group.co.uk

Derby (Head Office)	St Albans	London
Rowan House, Duffield Road, Little Eaton, Derby, DE21 5DR	Unit B, The Courtyard, Alban Park, St Albans, Hertfordshire, AL4 0LA	27 Cornwall Terrace Mews, Regents Park, London, NW1 5LL
t. (0133) 283 0044	t. (0172) 785 4481	t. (0207) 224 1806

CLIENT

Mott MacDonald

PROJECT

Hempland Primary School
Whitby Avenue, Stockton Lane
York

TITLE

Underground
PAS 128 Utility Survey

SCALE	DATE
A1@ 1: 200	08-10.11.21
DRAWN	**QUALITY REF**
SL/TP	14517

Level datum	
Grid orientation	
Job number	41967

Drawing No.	Rev.
41967_UG_4	0

Comments
This plan should only be used for its original purpose. Greenhatch Group accepts no responsibility for this plan if supplied to any party other than the original client.
All dimensions should be checked on site prior to design and construction.
Drainage information (where applicable) has been visually inspected from the surface and therefore should be treated as approximate only.

Notes:

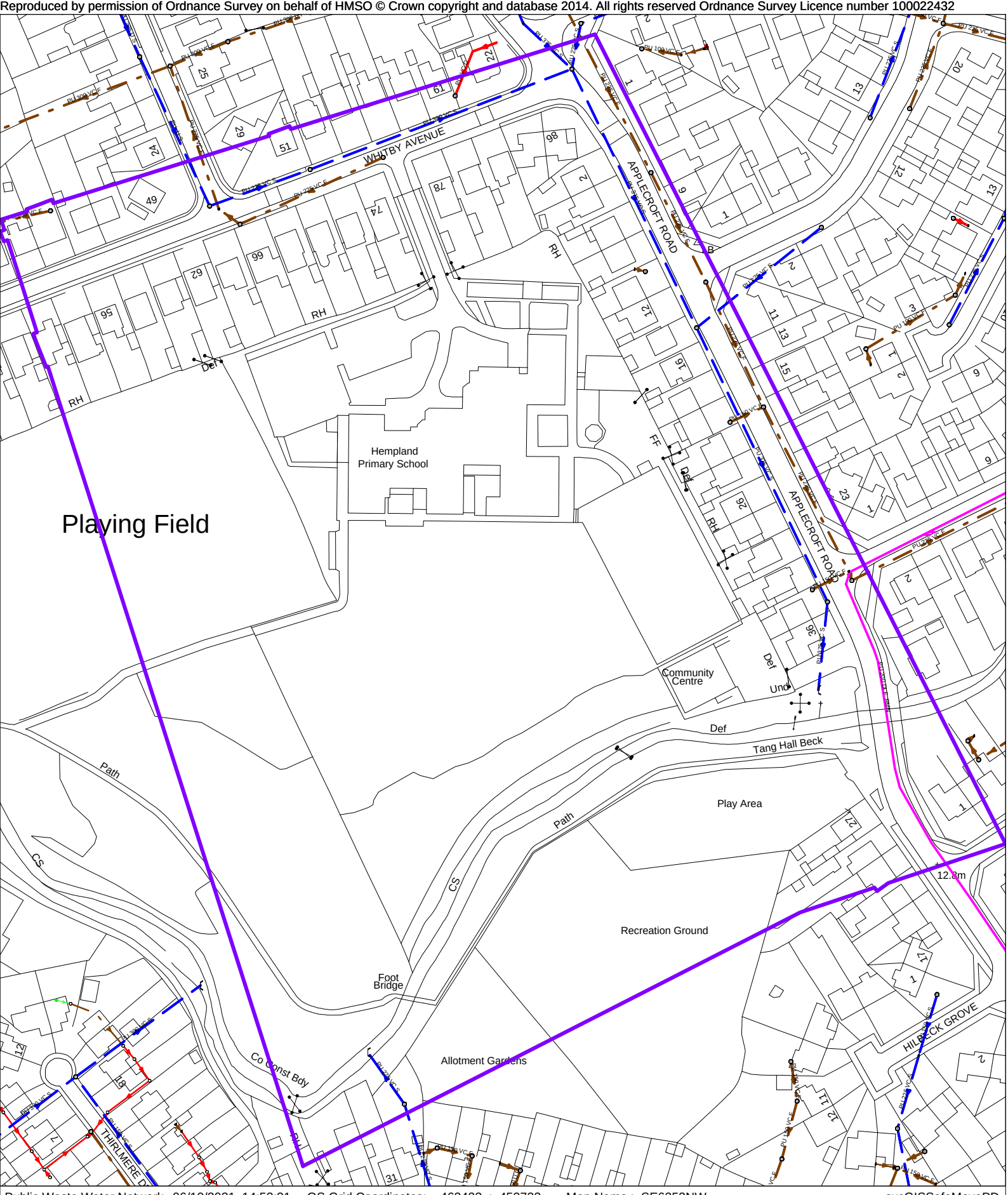
PAS128 QUALITY LEVEL DESCRIPTION

QL-A	HORIZONTAL AND VERTICAL LOCATION OF THE UTILITY VISUALLY DETECTED ABOVE GROUND OR LOCATED WITHIN TRIAL PITS, IC, MH'S ETC
B1	HORIZONTAL AND VERTICAL LOCATION OF THE UTILITY DETECTED BY MULTIPLE GEOPHYSICAL TECHNIQUES USED
B2	HORIZONTAL AND VERTICAL LOCATION OF THE UTILITY DETECTED BY ONE GEOPHYSICAL TECHNIQUES USED
B3	HORIZONTAL LOCATION ONLY OF THE UTILITY DETECTED BY ONE GEOPHYSICAL TECHNIQUES USED (PASSIVE)
B4	A UTILITY SEGMENT WHICH IS SUSPECTED TO EXIST BUT HAS NOT BEEN DETECTED AND IS THEREFORE SHOWN AS AN ASSUMED ROUTE.
QL-C	A SEGMENT OF UTILITY WHOSE LOCATION IS DEMONSTRATED BY VISUAL REFERENCE TO STREET FURNITURE, TOPOGRAPHICAL FEATURES OR EVIDENCE OF PREVIOUS STREET WORKS.
QL-D	A SEGMENT OF UTILITY WHOSE LOCATION CANNOT BE DEMONSTRATED BY VISUAL REFERENCE TO STREET FURNITURE OR TOPOGRAPHICAL FEATURES AND HAS BEEN DERIVED SOLELY FROM RECORD PLANS

©Copyright Greenhatch Group. 06/07/13

D. Yorkshire Water Sewer Maps

Reproduced by permission of Ordnance Survey on behalf of HMSO © Crown copyright and database 2014. All rights reserved Ordnance Survey Licence number 100022432



Public Waste Water Network 06/10/2021 14:52:21 OS Grid Coordinates: 462423 : 452723 Map Name : SE6252NW svcGISSafeMovePD

Registered office, Yorkshire water Services Limited. 1
Western House, Halifax Road, Bradford BD62SZ.
Registered in England and wales No. 2366682

SafeMove
A part of YorkshireWater

E. Preliminary MicroDrainage Calculations

E.1 Greenfield Runoff Rate Existing

E.2 Greenfield Runoff Rate Proposed

ICP SUDS Mean Annual Flood

Input

Return Period (years)	100	Soil	0.300
Area (ha)	1.080	Urban	0.000
SAAR (mm)	605	Region Number	Region 3

Results l/s

QBAR Rural	1.7
QBAR Urban	1.7
Q100 years	3.5
Q1 year	1.4
Q30 years	2.9
Q100 years	3.5

©1982-2020 Innovyze

ICP SUDS Mean Annual Flood

Input

Return Period (years)	100	Soil	0.450
Area (ha)	1.630	Urban	0.000
SAAR (mm)	606	Region Number	Region 3

Results l/s

QBAR Rural	6.0
QBAR Urban	6.0
Q100 years	12.6
Q1 year	5.2
Q30 years	10.6
Q100 years	12.6

©1982-2020 Innovyze

F. SuDS Drainage Maintenance Regime

Typical SuDS Drainage Maintenance Regime

Schedule	Required Action	Typical Frequency						
		Pond	**Dry Basin**	**Geocellular Storage**	**Permeable Paving**	**Flow Control**	**Collection Systems**	**Bio-retention / Rain Gardens**
Regular	Visual Inspection	Monthly for three months after installation	Monthly for three months after installation and then quarterly	Monthly for three months after installation	Monthly for three months after installation	Monthly	Monthly	Monthly for three months after installation
	Remove Litter and Debris	Monthly (or as required)	Monthly (or as required)	Monthly removal of litter from catchment area	Once a year after Autumn leaves fall, or reduced frequency as required	Once a year after Autumn leaves fall, or reduced frequency as required	Monthly	Monthly (or as required)
	Inspect and Identify Any Areas Not Operating Correctly.	-	-	Monthly or 3 months, then annually	Every month for first year, then annually	-	Monthly	-
	Cut Grass - In and Around Basin	Half yearly (spring - before nesting season, and Autumn)	In accordance with general site grass cutting strategy excluding specially planted areas	-	-	-	-	
	Manage Other Vegetation and Remove Nuisance Plants	Monthly (for first year, then as required)	Monthly (for first year, then as required)	-	As required - once per year	-	Monthly	At end of growing season, leave 50% of cuttings as mulch
	Inspect Inlets, Outlets and Overflows for Blockages/Damage	Monthly	Monthly	Monthly for first year then annually	-	Monthly	Monthly	Monthly
	Inspect Water Bodies for Signs of Poor Quality	Monthly (May - October)	-	-	-	-	-	-
	Inspect Vegetation Coverage	-	-	-	-	-	-	Monthly for 6 months, quarterly for 2 years, then half yearly
	Inspect Banksides, Pipework and Structures for Physical Damage	Monthly	Monthly	-	-	-	-	Monthly
	Inspect Inlets and facility surface for silt accumulation	Half Yearly until appropriate removal frequency is established	Half Yearly until appropriate removal frequency is established	-	-	-	-	Half Yearly until appropriate removal frequency is established
	Tidy All Dead Growth Before Start of Growing Season	-	-	-	-	-	-	Remove visible dead material
	Remove Sediment from Inlets, Outlets and Forebays	Every 1 - 5 years, or as required	Every 1 - 5 years, or as required	-	-	Annually	Annually	As required
	Check surface of permeable paving for blockages and clear	-	-	Annually	Annually	-	-	-
	Manage Wetland Plants	Annually	not applicable - basin to drain down fully	-	-	-	-	-
Occasional	Reseed Areas of Poor Vegetation Growth	As required	As required	-	-	-	-	As required or if bare soil is exposed over 10% or more of treatment area
	Remove Sediment from Main Body	Once every 25 - 50 years	Once every 25 - 50 years	Every 5 years or as required	Inspect annually, repair as required	-	-	As required
	Remove Sediment from Inlets, Outlets and Forebays	Every 5 years or as required	Every 5 years or as required	-	Inspect annually, repair as required	-	Annually	As required
Remedial Actions	Repair Erosion or other Damage by Reseeding or Re-turfing	As required	As required	-	-	-	-	As required
	Repair /Rehabilitation of Inlets, Outlets and Overflows	As required	As required	Visual inspection after storm, replace as required	-	-	-	-
	Relevel Uneven Surfaces and Reinstate Design Levels	As required	As required - if ponding obersved	-	As required to remove or replace cracked blocks and remediate surrounding landscape	-	-	As required
	Rehabilitate of surface and upper substructure by vacuum sweeping	-	-	-	every 5 years or as required	-	-	-
	Remove and dispose of oils or petrol residues using safe practices	-	-	-	-	Annually	Annually	As required - dig out and replace growing medium and reseed

G. Condition Data Collection School Condition Report

Condition Data Collection
School Condition Report

Hempland Primary Academy

School Details

Establishment:	Hempland Primary Academy
Address:	Whitby Avenue
	Stockton Lane
	York
	North Yorkshire
	YO31 1ET
Local Authority Area:	York
URN:	142844
LA/Establishment Number:	816/2001
School Visit Date:	23 October 2017
Surveying Organisation:	Capita

PLEASE DOWNLOAD THE CDC SCHOOL SITE PLAN TO READ IN CONJUNCTION WITH THIS REPORT

Contents

Section 1: Overview

Purpose of the Condition Data Collection (CDC) Programme

The CDC programme is a data collection exercise being undertaken by the Education and Skills Funding Agency (ESFA). Data is being collected on all government funded educational establishments in England.

The programme is designed to enable a distribution of capital maintenance funding to responsible bodies such as academy trusts, local authorities and dioceses. Its use to the department can be summarised as:

- Enabling capital allocation which is informed by school condition
- Identifying school blocks in need of replacement
- Supporting the development of capital allocations policy

About the CDC School Condition Report

This CDC School Condition Report is part of a number of reports and documents that are available to schools (and their responsible bodies) through the CDC Portal. The following table describes each of the reports currently available. More reports may be added as the programme progresses.

Document	Information Provided
School Condition Report (this report)	Summary and condition information about each block.
School Photo Pack	All photographs, including condition photographs, in a downloadable report.
School Site Plan	A site plan marked up with site boundary lines and block references used by the ESFA for the CDC.

Table 1: Descriptions of CDC documents available to schools

What can I use my CDC School Condition Report for?

CDC condition data for your school is presented in this report for your information and use. Please note: the words ‘school’ or ‘schools’ as used in this report refer to schools and all other educational establishments within scope of the CDC.

The CDC data is designed to provide a consistent and comparable view of condition across the education estate. The data collection process is not invasive nor a

structural survey, and the report generated from the data is not suitable for asset management purposes on its own.

This is because the report:

- x Does not report on hazardous materials (e.g. asbestos)
- x Does not address critical health and safety (H&S) requirements
- x Does not assess a school's compliance with all statutory and legislative responsibilities
- x Does not assess building capacity or suitability issues
- x Does not propose remedial actions to address condition issues
- x Does not include any cost information

CDC School Condition and Photo Pack reports can, however:

- ✓ Help you build an understanding of condition need at your school
- ✓ Highlight condition issues which need attention or further investigation (e.g. through a full condition survey or project feasibility study)
- ✓ Provide a view of roof condition
- ✓ Provide photographic evidence of condition issues (C, D, Bx and Cx only)
- ✓ Be used by academies and trusts in support of Condition Improvement Fund (CIF) bids alongside your own detailed condition surveys

CDC School Condition Report Content and Structure

This report is split into three sections plus an annex containing guidance:

Section 1 – Overview	An overview of the CDC programme including process and content.
Section 2 – Site and Block Summary Information	Summary information and photographs for each block on your site(s).
Section 3 – Condition Data Table	The condition and priority grades recorded for your buildings and school external site areas (including playing fields).
Annex A – How to Read this Report	Guidance on how to read Section 3.

Table 2: Report content summary

CDC Methodology

Buildings at each school are divided into 'blocks' which are identified by their age and construction type. Where schools have more than one site the report provides details for the blocks in each site. Some buildings on your site may be split into more than one block.

A total of twelve common building elements (e.g. roofs, floors/stairs, ceilings) have been visually assessed by CDC surveyors during the site visit, and have a condition grading plus a priority rating attributed to them.

Further information about how blocks are defined and the condition assessment methodology used by CDC surveyors can be found in Section 4 of the CDC Guide for Schools.

Providing Feedback

You will have the opportunity to provide feedback via the web-based CDC School Feedback Survey. You will receive a 'Smart Survey' link to the CDC Feedback Survey via email soon after this report has been made available within the CDC Portal.

You have limited time in which to complete your Feedback Survey

Your Feedback Survey must be completed within **three weeks** of receiving the Feedback Survey link email.

If a school report is released outside of term time, the Feedback Survey email to you will be delayed until after term time has re-started.

Section 2: Site and Block Summary Information

This section contains summary information about each block on each site. A photograph of each block is provided, together with the ESFA block reference ("EFAA", "EFAB", etc) and surveyor assessed age range for the block, floor area and other descriptive information.

A 'site' refers to the parcel of land used by a school with a reference (e.g. "EFA 1"). A separate parcel of land (e.g. separate playing fields) will have a separate site reference.

The site and block references used correspond to those used on the CDC site plan.

The CDC Site Plan and Photo Pack can be generated from the CDC Portal. Further guidance on how to access these documents is included in the school condition report notification communication.

You will need to have your CDC Site Plan and Photo Pack to hand when reading this report. The site plan provides a visual key to the block references used in Section 3 of this report.

Block Information Summary Table

Site	Block	Block Age Range	GIFA (m2)
EFA1	ANC1		190
EFA1	ANC2		3
EFA1	EFAA	1961-1970	3374
EFA1	EFAB	2011-2020	36

Total GIFA: 3603 m2

Block Listing

Summary details for each block are shown below.

Blocks named “ANC1”, “ANC2” etc are ancillary blocks which are not used specifically for education purposes, such as sheds, ex-caretaker bungalows in residential use and garages. CDC surveyors do not collect condition information for ancillary blocks.

Site	EFA1
Block	**ANC1**
Building Age	
No. of Storeys	1
Basement Area (m2)	
Gross Internal Floor Area (m2)	190
Ground Floor GIFA (m2)	190
Perimeter (m)	0
Average Height (m)	3
Catering Kitchen	

Site	EFA1
Block	**ANC2**
Building Age	
No. of Storeys	1
Basement Area (m2)	
Gross Internal Floor Area (m2)	3
Ground Floor GIFA (m2)	3
Perimeter (m)	0
Average Height (m)	2
Catering Kitchen	

Site	EFA1
Block	**EFAA**
Building Age	1961-1970
No. of Storeys	2
Basement Area (m2)	0
Gross Internal Floor Area (m2)	3374
Ground Floor GIFA (m2)	2410
Perimeter (m)	353
Average Height (m)	6
Catering Kitchen	Full Kitchen

Site	EFA1
Block	**EFAB**
Building Age	2011-2020
No. of Storeys	1
Basement Area (m2)	0
Gross Internal Floor Area (m2)	36
Ground Floor GIFA (m2)	36
Perimeter (m)	25
Average Height (m)	3
Catering Kitchen	No Kitchen

Section 3: Condition Data Table

Section 3 presents, in table form, the CDC condition information captured by surveyors when they visited the school. This includes condition grading, priority rating and percentage compositions of existing **construction types** within the blocks of each site. The table headings are explained in Annex of this report.

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1	11. Site Areas & External Areas / 11.01. Underground Drainage /	Generally	11.01.01	Unseen - Based on School Discussion / Report	A B Bx C Cx D	0 100 0 0 0 0	N/A 3 N/A N/A N/A N/A	
EFA1	11. Site Areas & External Areas / 11.03. Boundary Walls and Fences /	Timber / Metal / Chain Link	11.03.02	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1	11. Site Areas & External Areas / 11.04. Storage Tanks /	Fuel Storage Tank	11.04.02	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1	11. Site Areas & External Areas / 11.05. Ground Surface /	Tarmac / Concrete Roads, Vehicle Hardstandings and Car Parks	11.05.01	Seen	A B Bx C Cx D	95 5	4 1	EFA1/11.05.01
EFA1	11. Site Areas & External Areas / 11.05. Ground Surface /	Tarmac / Concrete Paths and Non Vehicle Hardstanding Areas	11.05.03	Seen	A B Bx C Cx D	75 15 0 10	4 2 N/A 1	EFA1/11.05.03
EFA1	11. Site Areas & External Areas / 11.05. Ground Surface /	Soft Landscaping / Planted Areas	11.05.05	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1	11. Site Areas & External Areas / 11.05. Ground Surface /	Grass	11.05.06	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1	11. Site Areas & External Areas / 11.05. Ground Surface /	Artificial / Soft Play / Specialist Surfaces	11.05.07	Seen	A B Bx C Cx D	50 50 0	4 3 N/A	
EFA1	11. Site Areas & External Areas / 11.07. Fences, Walls, Barriers etc (Exc. Site Boundary) /	Timber / Metal / Chain Link	11.07.02	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1	11. Site Areas & External Areas / 11.08. Steps and Ramps (Including Balustrading) /	Concrete / Brickwork / Stone	11.08.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1	11. Site Areas & External Areas / 11.09. Covered Walkways and Freestanding Canopies /	Generally	11.09.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1	11. Site Areas & External Areas / 11.10. Fixed Furniture & Equipment /	Generally	11.10.01	Seen	A B Bx C Cx D	95 5	4 1	EFA1/11.10.01
EFA1	11. Site Areas & External Areas / 11.11. Freestanding Site Lighting /	Generally	11.11.01	Seen	A B Bx C Cx D	0 0 0 0 0 100	N/A N/A N/A N/A N/A 1	EFA1/11.11.01
EFA1	12. Playing Fields / 12.01. Ground Surface /	Grass	12.01.04	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	01. Roofs / 01.01. Structure /	Flat Roof Structure and Deck - Generally	01.01.01	Unseen - Based on Surveyors Judgement	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAA	01. Roofs / 01.01. Structure /	Pitched Roof Structure - Generally	01.01.02	Unseen - Based on Surveyors Judgement	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	01. Roofs / 01.02. Flat Roof Covering and Insulation /	Flexible Sheet; Single Ply or Built Up	01.02.01	Seen	A B Bx C Cx D	75 0 25 0	3 N/A 2 N/A	EFAA/01.02.01
EFA1/EFAA	01. Roofs / 01.02. Flat Roof Covering and Insulation /	Glazed Areas / Rooflights	01.02.06	Seen	A B Bx C Cx D	50 0 50 0	4 3 N/A 2 N/A	EFAA/01.02.06
EFA1/EFAA	01. Roofs / 01.03. Pitched Roof Covering and Insulation /	Flexible Sheet; Single Ply or Built Up	01.03.03	Seen	A B Bx C Cx D	75 0 25 0	3 N/A 2 N/A	EFAA/01.03.03

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAA	01. Roofs / 01.03. Pitched Roof Covering and Insulation /	Glazed Areas / Rooflights	01.03.08	Seen	A B Bx C Cx D	0 50 0 50 0 0	N/A 3 N/A 2 N/A N/A	EFAA/01.03.08
EFA1/EFAA	01. Roofs / 01.04. Flat Roof Drainage /	Aluminium	01.04.03	Seen	A B Bx C Cx D	0 100 0 0 0 0	N/A 3 N/A N/A N/A N/A	
EFA1/EFAA	01. Roofs / 01.05. Pitched Roof Drainage /	Aluminium	01.05.03	Seen	A B Bx C Cx D	0 100 0 0 0 0	N/A 3 N/A N/A N/A N/A	
EFA1/EFAA	01. Roofs / 01.06. Fascias Soffits and Peripheral Joinery /	Timber	01.06.01	Seen	A B Bx C Cx D	90 10 0	4 3 N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAA	02. Floors and Stairs / 02.01. Floor Structure /	Ground Bearing Solid Floor Structure	02.01.01	Unseen - Based on Surveyors Judgement	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	02. Floors and Stairs / 02.01. Floor Structure /	Suspended Floor Structure	02.01.02	Unseen - Based on Surveyors Judgement	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	02. Floors and Stairs / 02.02. Floor Construction Finish /	Concrete (and Screed) Construction	02.02.01	Unseen - Based on Surveyors Judgement	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	02. Floors and Stairs / 02.03. Floor Applied Finish /	Exposed Construction Finish	02.03.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAA	02. Floors and Stairs / 02.03. Floor Applied Finish /	Hardwood Strip / Wood block / Sprung Flooring	02.03.02	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	02. Floors and Stairs / 02.03. Floor Applied Finish /	Vinyl / Rubber / Cork in Tiles / Sheet	02.03.03	Seen	A B Bx C Cx D	90 10 0	4 1 N/A	EFAA/02.03.03
EFA1/EFAA	02. Floors and Stairs / 02.03. Floor Applied Finish /	Ceramic Tiles / Terrazzo	02.03.04	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	02. Floors and Stairs / 02.03. Floor Applied Finish /	Carpet	02.03.05	Seen	A B Bx C Cx D	60 40 0	4 3 N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAA	02. Floors and Stairs / 02.04. Internal Staircase Construction /	Concrete Structure, Treads and Metal Balustrading / Handrails	02.04.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	03. Ceilings / 03.01. Ceiling Construction /	Plaster / Render / Plasterboard / Timber Lining/ Fibreboard / Acoustic Lining	03.01.02	Seen	A B Bx C Cx D	95 5 0	4 2 N/A	EFAA/03.01.02
EFA1/EFAA	03. Ceilings / 03.01. Ceiling Construction /	Suspended Ceiling; Timber Boarding / Panels / Fibreboard / Acoustic Tiles / Metal Tiles	03.01.03	Seen	A B Bx C Cx D	90 10 0	4 2 N/A	EFAA/03.01.03
EFA1/EFAA	04. External Walls, Windows and Doors / 04.01. Block Structure /	Concrete Frame	04.01.01	Unseen - Based on Surveyors Judgement	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAA	04. External Walls, Windows and Doors / 04.01. Block Structure /	Loadbearing Masonry	04.01.06	Unseen - Based on Surveyors Judgement	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	04. External Walls, Windows and Doors / 04.02. External Envelope /	Exposed Loadbearing Masonry	04.02.07	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	04. External Walls, Windows and Doors / 04.02. External Envelope /	Component Metal Windows & Doors	04.02.14	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	04. External Walls, Windows and Doors / 04.02. External Envelope /	Component Timber Windows & Doors	04.02.15	Seen	A B Bx C Cx D	0 0 0 100 0 0	N/A N/A N/A 2 N/A N/A	EFAA/04.02.15

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAA	04. External Walls, Windows and Doors / 04.02. External Envelope /	Component PVCu Windows & Doors	04.02.16	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	04. External Walls, Windows and Doors / 04.02. External Envelope /	75/25 Part Glazed Part Infill Panel Framed Curtain Walling or Integrated Window &	04.02.18	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	04. External Walls, Windows and Doors / 04.03. External Envelope Applied Finishes /	Exposed Envelope	04.03.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	04. External Walls, Windows and Doors / 04.03. External Envelope Applied Finishes /	Render	04.03.04	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAA	05. Internal Walls and Doors / 05.01. Walls and Partitions Construction Finishes and Applied Finishes /	Exposed Walls & Partitions Structure / No Finish / Self Finished	05.01.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	05. Internal Walls and Doors / 05.01. Walls and Partitions Construction Finishes and Applied Finishes /	Walls and Partitions Plastered Finish	05.01.02	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	05. Internal Walls and Doors / 05.01. Walls and Partitions Construction Finishes and Applied Finishes /	Glazed Screen Partition	05.01.03	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	05. Internal Walls and Doors / 05.01. Walls and Partitions Construction Finishes and Applied Finishes /	Sliding / Folding Partition	05.01.04	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAA	05. Internal Walls and Doors / 05.01. Walls and Partitions Construction Finishes and Applied Finishes /	Walls and Partitions Applied Cermaic Tiles	05.01.08	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	05. Internal Walls and Doors / 05.02. Doors /	Solid Timber	05.02.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	06. Sanitary Ware / 06.01. Sanitary Ware /	Generally	06.01.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAA	07. Mechanical Services / 07.01. Heat Source /	Hydro-Carbon Heat Source	07.01.01	Seen	A B Bx C Cx D	0 0 0 0 0 100	N/A N/A N/A N/A N/A 1	EFAA/07.01.01

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFAA	07. Mechanical Services / 07.02. Ancillary Plant /	Ancillary Plant	07.02.01	Seen	A B Bx C Cx D	0 0 0 0 0 100	N/A N/A N/A N/A N/A 1	EFAA/07.02.01
EFAA	07. Mechanical Services / 07.04. Heat Emitters and Pipework /	No Heating	07.04.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAA	07. Mechanical Services / 07.04. Heat Emitters and Pipework /	Wet System Emitters	07.04.02	Seen	A B Bx C Cx D	30 5 0 65	4 2 N/A 1	EFAA/07.04.02
EFAA	07. Mechanical Services / 07.04. Heat Emitters and Pipework /	Forced Heated Vent	07.04.05	Seen	A B Bx C Cx D	0 0 0 0 0 100	N/A N/A N/A N/A N/A 1	EFAA/07.04.05

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFAA	07. Mechanical Services / 07.04. Heat Emitters and Pipework /	Distribution Pipework	07.04.08	Seen	A B Bx C Cx D	10 90	4 1	EFAA/07.04.08
EFAA	07. Mechanical Services / 07.05. Hot & Cold Water /	Calorifiers (Indirect)	07.05.02	Seen	A B Bx C Cx D	0 0 0 0 0 100	N/A N/A N/A N/A N/A 1	EFAA/07.05.02
EFAA	07. Mechanical Services / 07.05. Hot & Cold Water /	Distribution Systems (inc Tanks & Outlets)	07.05.03	Seen	A B Bx C Cx D	0 0 0 0 0 100	N/A N/A N/A N/A N/A 1	EFAA/07.05.03
EFAA	07. Mechanical Services / 07.06. Fuel System /	Fuel System Pipework (Meter to Boiler)	07.06.01	Seen	A B Bx C Cx D	0 100 0 0 0 0	N/A 3 N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFAA	07. Mechanical Services / 07.06. Fuel System /	Fill Point	07.06.02	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAA	07. Mechanical Services / 07.06. Fuel System /	Fuel Storage Tank within Block	07.06.03	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAA	07. Mechanical Services / 07.07. Mechanical Ventilation /	Local Extract	07.07.01	Seen	A B Bx C Cx D	0 100 0 0 0 0	N/A 3 N/A N/A N/A N/A	
EFAA	07. Mechanical Services / 07.07. Mechanical Ventilation /	Ducted System	07.07.02	Seen	A B Bx C Cx D	0 100 0 0 0 0	N/A 3 N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFAA	07. Mechanical Services / 07.07. Mechanical Ventilation /	Kitchen Extract	07.07.03	Seen	A B Bx C Cx D	0 0 0 0 0 100	N/A N/A N/A N/A N/A 1	EFAA/07.07.03
EFAA	07. Mechanical Services / 07.07. Mechanical Ventilation /	No Mechanical Ventilation	07.07.04	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAA	07. Mechanical Services / 07.08. Air Conditioning /	Condenser/Pipework	07.08.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAA	07. Mechanical Services / 07.08. Air Conditioning /	Split AC System	07.08.02	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFAA	07. Mechanical Services / 07.08. Air Conditioning /	No DX Conditioning	07.08.03	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAA	07. Mechanical Services / 07.09. Fire Suppression /	Fire Hose Reel(s)	07.09.02	Seen	A B Bx C Cx D	0 0 0 0 0 100	N/A N/A N/A N/A N/A 1	EFAA/07.09.02
EFAA	07. Mechanical Services / 07.09. Fire Suppression /	No Fire Suppression	07.09.05	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAA	07. Mechanical Services / 07.10. Above Ground Drainage /	Drainage Pipework System	07.10.01	Seen	A B Bx C Cx D	0 0 0 0 0 100	N/A N/A N/A N/A N/A 1	EFAA/07.10.01

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFAA	08. Electrical Services / 08.01. Electrical Distribution /	Supply & Main Switch Panel	08.01.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAA	08. Electrical Services / 08.01. Electrical Distribution /	Sub Mains	08.01.02	Seen	A B Bx C Cx D	0 0 0 0 0 100	N/A N/A N/A N/A N/A 1	EFAA/08.01.02
EFAA	08. Electrical Services / 08.01. Electrical Distribution /	Distribution Boards	08.01.03	Seen	A B Bx C Cx D	0 100 0 0 0 0	N/A 3 N/A N/A N/A N/A	
EFAA	08. Electrical Services / 08.01. Electrical Distribution /	Outgoing Circuits	08.01.04	Unseen - Based on Surveyors Judgement	A B Bx C Cx D	0 0 0 0 0 100	N/A N/A N/A N/A N/A 1	EFAA/08.01.04

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFAA	08. Electrical Services / 08.03. Automatic Control Systems /	BMS	08.03.01	Seen	A B Bx C Cx D	0 0 0 0 0 100	N/A N/A N/A N/A N/A 1	EFAA/08.03.01
EFAA	08. Electrical Services / 08.04. Small Power /	Outlets	08.04.01	Seen	A B Bx C Cx D	50 50 0	4 3 N/A	
EFAA	08. Electrical Services / 08.05. Lightning Protection /	Generally	08.05.01	Seen	A B Bx C Cx D	0 0 0 0 0 100	N/A N/A N/A N/A N/A 1	EFAA/08.05.01
EFAA	08. Electrical Services / 08.06. Lighting /	Luminaires	08.06.01	Seen	A B Bx C Cx D	10 90	4 1	EFAA/08.06.01

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFAA	08. Electrical Services / 08.06. Lighting /	Emergency Lighting	08.06.02	Seen	A B Bx C Cx D	0 0 0 0 0 100	N/A N/A N/A N/A N/A 1	EFAA/08.06.02
EFAA	08. Electrical Services / 08.06. Lighting /	External Lighting on Block Facades	08.06.03	Seen	A B Bx C Cx D	 60 0 40	 3 N/A 1	EFAA/08.06.03
EFAA	08. Electrical Services / 08.07. Fire Alarm /	Main Panel	08.07.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAA	08. Electrical Services / 08.07. Fire Alarm /	Devices/Wiring	08.07.02	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFAA	08. Electrical Services / 08.08. Security Systems & Other Alarm Systems /	Intruder Alarm System	08.08.01	Seen	A B Bx C Cx D	0 100 0 0 0 0	N/A 3 N/A N/A N/A N/A	
EFAA	08. Electrical Services / 08.08. Security Systems & Other Alarm Systems /	Access Control	08.08.02	Seen	A B Bx C Cx D	0 100 0 0 0 0	N/A 3 N/A N/A N/A N/A	
EFAA	08. Electrical Services / 08.08. Security Systems & Other Alarm Systems /	CCTV System	08.08.03	Seen	A B Bx C Cx D	0 100 0 0 0 0	N/A 3 N/A N/A N/A N/A	
EFAA	08. Electrical Services / 08.09. Communications and Infrastructure /	IT infrastructure	08.09.01	Seen	A B Bx C Cx D	0 100 0 0 0 0	N/A 3 N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAA	09. Redecorations / 09.01. External - Walls (Masonry Paint) /	Unpainted	09.01.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	09. Redecorations / 09.02. External - Windows Doors and External Joinery /	Unpainted	09.02.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	09. Redecorations / 09.02. External - Windows Doors and External Joinery /	Painted	09.02.02	Seen	A B Bx C Cx D	0 0 0 100 0 0	N/A N/A N/A 2 N/A N/A	EFAA/09.02.02
EFA1/EFAA	09. Redecorations / 09.03. Internal - Walls and Internal Joinery /	Unpainted	09.03.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAA	09. Redecorations / 09.03. Internal - Walls and Internal Joinery /	Painted	09.03.02	Seen	A B Bx C Cx D	0 100 0 0 0 0	N/A 3 N/A N/A N/A N/A	
EFA1/EFAA	09. Redecorations / 09.04. Internal - Ceilings /	Unpainted	09.04.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	09. Redecorations / 09.04. Internal - Ceilings /	Painted	09.04.02	Seen	A B Bx C Cx D	0 100 0 0 0 0	N/A 3 N/A N/A N/A N/A	
EFA1/EFAA	10. Fixed Furniture and Fittings / 10.01. Fixed Furniture and Fittings /	Teaching - Sports / Multi-Purpose Use; Sports / Dining / Assembly Halls	10.01.02	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAA	10. Fixed Furniture and Fittings / 10.01. Fixed Furniture and Fittings /	Teaching - General / Other (Non Science / Sports)	10.01.03	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAA	10. Fixed Furniture and Fittings / 10.01. Fixed Furniture and Fittings /	Non-Teaching - Catering Kitchen	10.01.04	Seen	A B Bx C Cx D	0 100 0 0 0 0	N/A 3 N/A N/A N/A N/A	
EFA1/EFAA	10. Fixed Furniture and Fittings / 10.01. Fixed Furniture and Fittings /	Non-Teaching - Toilets / Showers / Changing Rooms	10.01.05	Seen	A B Bx C Cx D	10 90 0	4 3 N/A	
EFA1/EFAA	10. Fixed Furniture and Fittings / 10.01. Fixed Furniture and Fittings /	Non Teaching - Other (Circulation / Cloaks / Admin / Storage / Staff Room / Plant)	10.01.06	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAB	01. Roofs / 01.01. Structure /	Flat Roof Structure and Deck - Generally	01.01.01	Unseen - Based on Surveyors Judgement	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAB	01. Roofs / 01.02. Flat Roof Covering and Insulation /	Flexible Sheet; Single Ply or Built Up	01.02.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAB	01. Roofs / 01.04. Flat Roof Drainage /	Aluminium	01.04.03	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAB	01. Roofs / 01.06. Fascias Soffits and Peripheral Joinery /	Metal	01.06.02	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAB	02. Floors and Stairs / 02.01. Floor Structure /	Ground Bearing Solid Floor Structure	02.01.01	Unseen - Based on Surveyors Judgement	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAB	02. Floors and Stairs / 02.02. Floor Construction Finish /	Concrete (and Screed) Construction	02.02.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAB	02. Floors and Stairs / 02.03. Floor Applied Finish /	Vinyl / Rubber / Cork in Tiles / Sheet	02.03.03	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAB	02. Floors and Stairs / 02.03. Floor Applied Finish /	Carpet	02.03.05	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAB	03. Ceilings / 03.01. Ceiling Construction /	Suspended Ceiling; Timber Boarding / Panels / Fibreboard / Acoustic Tiles / Metal Tiles	03.01.03	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAB	04. External Walls, Windows and Doors / 04.01. Block Structure /	Timber Frame	04.01.04	Unseen - Based on Surveyors Judgement	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAB	04. External Walls, Windows and Doors / 04.01. Block Structure /	Loadbearing Masonry	04.01.06	Unseen - Based on Surveyors Judgement	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAB	04. External Walls, Windows and Doors / 04.02. External Envelope /	Unknown Envelope Substrate Beneath Applied Finish	04.02.03	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAB	04. External Walls, Windows and Doors / 04.02. External Envelope /	Exposed Loadbearing Masonry	04.02.07	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAB	04. External Walls, Windows and Doors / 04.02. External Envelope /	Component Metal Windows & Doors	04.02.14	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAB	04. External Walls, Windows and Doors / 04.02. External Envelope /	Component Timber Windows & Doors	04.02.15	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAB	04. External Walls, Windows and Doors / 04.03. External Envelope Applied Finishes /	Exposed Envelope	04.03.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAB	04. External Walls, Windows and Doors / 04.03. External Envelope Applied Finishes /	Timber / uPVC Boarding	04.03.03	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAB	05. Internal Walls and Doors / 05.01. Walls and Partitions Construction Finishes and Applied Finishes /	Exposed Walls & Partitions Structure / No Finish / Self Finished	05.01.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAB	05. Internal Walls and Doors / 05.01. Walls and Partitions Construction Finishes and Applied Finishes /	Walls and Partitions Plastered Finish	05.01.02	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAB	05. Internal Walls and Doors / 05.01. Walls and Partitions Construction Finishes and Applied Finishes /	Walls and Partitions Applied Cermaic Tiles	05.01.08	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAB	05. Internal Walls and Doors / 05.02. Doors /	Solid Timber	05.02.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAB	07. Mechanical Services / 07.04. Heat Emitters and Pipework /	No Heating	07.04.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAB	07. Mechanical Services / 07.04. Heat Emitters and Pipework /	Wet System Emitters	07.04.02	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAB	07. Mechanical Services / 07.04. Heat Emitters and Pipework /	Distribution Pipework	07.04.08	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFAB	07. Mechanical Services / 07.05. Hot & Cold Water /	Calorifiers (Direct)	07.05.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAB	07. Mechanical Services / 07.05. Hot & Cold Water /	Distribution Systems (inc Tanks & Outlets)	07.05.03	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAB	07. Mechanical Services / 07.07. Mechanical Ventilation /	No Mechanical Ventilation	07.07.04	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAB	07. Mechanical Services / 07.08. Air Conditioning /	No DX Conditioning	07.08.03	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFAB	07. Mechanical Services / 07.09. Fire Suppression /	No Fire Suppression	07.09.05	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAB	07. Mechanical Services / 07.10. Above Ground Drainage /	Drainage Pipework System	07.10.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAB	08. Electrical Services / 08.01. Electrical Distribution /	Sub Mains	08.01.02	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAB	08. Electrical Services / 08.01. Electrical Distribution /	Distribution Boards	08.01.03	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFAB	08. Electrical Services / 08.01. Electrical Distribution /	Outgoing Circuits	08.01.04	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAB	08. Electrical Services / 08.04. Small Power /	Outlets	08.04.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAB	08. Electrical Services / 08.06. Lighting /	Luminaires	08.06.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAB	08. Electrical Services / 08.06. Lighting /	Emergency Lighting	08.06.02	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFAB	08. Electrical Services / 08.06. Lighting /	External Lighting on Block Facades	08.06.03	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAB	08. Electrical Services / 08.07. Fire Alarm /	Devices/Wiring	08.07.02	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAB	08. Electrical Services / 08.08. Security Systems & Other Alarm Systems /	Intruder Alarm System	08.08.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFAB	08. Electrical Services / 08.09. Communications and Infrastructure /	IT infrastructure	08.09.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	

Location (Site/Block)	Element / Sub Element	Construction Type	Construction Type Code	Basis of Assessment	Grade	Condition Grade %	Repair Priority	Photo Reference
EFA1/EFAB	09. Redecorations / 09.01. External - Walls (Masonry Paint) /	Unpainted	09.01.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAB	09. Redecorations / 09.02. External - Windows Doors and External Joinery /	Unpainted	09.02.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAB	09. Redecorations / 09.03. Internal - Walls and Internal Joinery /	Unpainted	09.03.01	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	
EFA1/EFAB	09. Redecorations / 09.03. Internal - Walls and Internal Joinery /	Painted	09.03.02	Seen	A B Bx C Cx D	100 0 0 0 0 0	4 N/A N/A N/A N/A N/A	