BROWNFIELD SOLUTIONS LTD

GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

# MORGAN SINDALL

## Star Academy, Radcliffe

Remediation Validation Report

PH/C5394/14825

May 2026

## PROJECT QUALITY CONTROL DATA SHEET

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| FS1013-ALA-EX-ZZ-D-L-0001 | P01 | Whole Site Plan |
| FS1013-ALA-EX-ZZ-D-L-0001 | P20 | Whole Site Plan with Phased Handover Areas Markup (31.03.26) |
| C5394/07 | - | WS101 Organic Matter Plan |

| DRAWINGS | | |
|---|---|---|
| **Drawing Number** | **Re** | **Title** |
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# 1.0 INTRODUCTION

## 1.1 Context

This Remediation Validation Report has been produced by Brownfield Solutions Limited (BSL) on behalf of Morgan Sindall for a site off Spring Lane, Radcliffe.

As of May 2026, remedial works are ongoing, and this report will be updated upon satisfactory completion of the remediation.

The site has been split into two Phases for the purposes of planning handover (1&2), as shown on the Whole Site Plan drawing with phasing markup (FS1013-ALA-EX-ZZ-D-L-000-P20).

## 1.2 Objectives

The objective of the validation works is to provide evidence demonstrating implementation of appropriate remediation measures. The remedial works were carried out in order to make the site suitable for the proposed end use, as per the BSL Remedial Strategy, reference JM/C5394/12387 Rev A, dated July 2024, which is understood to have been accepted by the Local Planning Authority (Bury Council).

## 1.3 Proposed Development

The proposed development involves the construction of a 'super teaching block' with a sports hall annexe and extensive MUGA / Sports Pitches as shown on the Site Constraints Plan, drawing No. FS1013-REN-XX-XX-D-CS-5100-P02 provided to BSL by Renaissance Associates Ltd.

Prior to the main development described above, the south-eastern area of the site is undergoing temporary redevelopment into a temporary school building under a separate planning permission; separate interim remedial requirements are detailed accordingly for the temporary development within BSL Remedial Strategy ref. PH/C5394/12924 Rev A, dated July 2024, although it should be noted that the remedial requirements detailing within both strategies are generally aligned. It is assumed that the temporary accommodation development will remain onsite until the 'super teaching block' with a sports hall annexe, as detailed within this strategy, is constructed, at which point the 'temporary accommodation site' in the south-eastern area will require redevelopment into MUGA and sports pitches and the requirements of this strategy should be implemented accordingly, although as stated previously the remedial requirements for both the temporary accommodation and main site are aligned.

In line with the above, Morgan Sindall has proved a drawing (ref. FS1013-ALA-EX-ZZ-D-L-0001-P20 Phasing Markup) which shows the phased handover areas for the purposes of discarding planning conditions.

## 1.4 Previous Reports and Correspondence

The following reports are applicable to the site and should be read in conjunction with this validation report:

- Geotechnics, Desk Study Report, ref PC228400, dated May 2022.
- Geotechnics, Preliminary Ground Investigation Report with Interpretive Chapter, ref: PN224390, dated August 2022.
- BSL Coal Mining Risk Assessment, ref: PH/C5394/12312, issued August 2023.
- BSL Phase II Geo-Environmental Assessment Report, ref: PH/C5394/12387 Rev D, issued July 2024.

- BSL Phase II Geo-Environmental Assessment Report – Temporary Accommodation, ref: CM/C5394/12669 Rev B, issued July 2024.
- BSL Remedial Strategy – Temporary Accommodation, ref: PH/C5394/12924 Rev A, dated July 2024.
- BSL Remedial Strategy, ref JM/C5394/12387 Rev A, dated July 2024.
- BSL Remediation Strategy Closure Statement – Temporary Accommodation 2, ref KB/C5394/14482, dated July 2024.
- BSL Geo-Environmental Letter Report, ref PH/C5394/14449, dated July 2025.
- BSL Earthworks Validation Report, ref PH/C5394/14753, dated October 2025.
- BSL Earthworks Validation Report – Highways, ref AH/C5394/14880, dated May 2026.

It is assumed that the Local Planning Authority will have provided the above reports to the appropriate statutory consultees and the recommendations therein have been accepted.

### 1.5 Limitations

This report has been carried out based on information obtained from a number of areas, BSL have assumed that this information is correct.

There may be other conditions prevailing on the site which are outside the scope of work and have not been highlighted by this report and therefore not been taken into account by this report. Responsibility cannot be accepted for such site conditions not revealed by the assessment.

This report has been prepared for the sole use and reliance of the Client, Morgan Sindall. No other third parties may rely upon or reproduce the contents of this report without the written permission of Brownfield Solutions Ltd (BSL). If any unauthorised third party comes into possession of this report, they rely on it at their own risk and BSL do not owe them any Duty of Care.

This report has been based on the proposed planning layouts provided. Any subsequent change to the planning layout may have an impact on the validity of recommendations made within this report. Furthermore, new information, changed practices or new legislation may necessitate revised interpretation of the report after the date of its submission.

The site plans enclosed in this report should not be scaled off. Any site boundary line depicted on plans does not imply legal ownership of land.

Any recommendations made in this report should be confirmed with the Regulatory Authorities to ensure compliance.

# 2.0 GROUND MODEL SUMMARY

## 2.1 Description of Site

The site is located off Spring Lane, Radcliffe, M26 2SZ. It is situated approximately 0.5 km north of Radcliffe Town Centre, centred on National Grid Reference 378700, 407630 as shown on the Site Location Plan, Drawing No. C5394/01.

The main site features and potential issues identified during the time of the intrusive investigation are detailed below.

| Feature | Description |
|---|---|
| Site Area | The site covers approximately 6.4 hectares. |
| Site Access | Access to the site is gained off Spring Lane to the south. |
| Current Land Use and Site Features | The north section of the site consists of an overgrown playing field and a sports court surfaced in hardstanding in the north-easternmost section.<br>The lower south section of the site is comprised of a secondary school (Spring Lane School) and leisure centre (Radcliffe Leisure Centre) with associated hardstanding car parking areas.<br>Note that as of May 2024, the former school and leisure centre buildings have been demolished except for an electricity substation which is being retained.<br>A public footpath runs along the south-west border of the site (Banana Path).<br><br>There are several manholes and services present in the proximity of the secondary school and leisure centre, however the majority of underground services are likely to have been decommissioned and grubbed out from this area of the site during the demolition works. Service plans provided by the client also show an intermediate pressure gas main trending north-south across the derelict playing field. Multiple services are also shown to be present within the area of the old sports courts / new car parking areas in the north-east section of the site. |
| Potential Mining Related Features | No potential mining related features have been observed onsite. |
| Potential Sources of Gross Contamination | Potential sources of gross contamination included the boiler house associated with the school development. There is also a chimney associated with the boiler house, although BSL understand this is disused and new gas boilers were installed in 2015 and 2019 for the school and leisure centre. |
| Vegetation | Mature / semi-mature trees are present along the north and east borders of the site. Small clusters of trees are also present near the entrance to the site off Spring Lane, to the west of the school / leisure centre building and in the far north-west corner of the site. A wooded area is also present to the west of the school building. |
| Topography | The site generally appears to gently slope to the south-east. A slope is present between the field in the west and the school cark parks in the east and has a change of 2m elevation. Based on currently provided topography plans, there is a 7m different between the east and west extents of the site. |
| Site Boundaries | The site is enclosed by steel palisade fencing along the eastern border of the site, a wooded area to the north of the site, steel railings to the west and Spring Lane to the south. |
| Surrounding Area | The site is set within a mixed commercial and residential area, with a park and ride car park present to the south, residential properties to the west, a railway to the east, the disused Manchester Bolton and Bury Canal to the north-west and a wooded area to the north. |

## 2.2 Environmental Setting

*Site History*

The site has been shown to have been developed from 1850, with a railway track transversing through the centre of the site. The historical site features are generally related to the railway development with associated goods yards and sidings, present until 1978. From 1987 a school is present onsite with

associated playing fields and infrastructure. The school and an adjacent leisure centre were demolished between April and May 2024.

The surrounding developments include both industrial and residential. Evidence of mining has been present on the historical maps from 1850 with a colliery (Whittaker's Bridge Colliery) being present from 1891 to 1909, 60m NW of the site. Various industrial works have been present within 100m of the site.

*Published Geology and Hydrogeology*
From the Desk Study Assessment and published geology, it was anticipated that ground conditions would comprise the following sequence of strata (top down):

- Made Ground; over
- Glacial Till Deposits (north-west half of site) or Glaciofluvial Deposits (south-east half of site); over
- Pennine Middle Coal Measures Formation.

*Hydrogeology*
Based on the inferred geology, a summary of the Environment Agency aquifer designations is presented in the table below:

| Stratum | Coverage | Aquifer Designation |
|---|---|---|
| Glacial Till | NW half | Secondary Aquifer (Undifferentiated). The classification is assigned where it is not possible to attribute either category A or B to the aquifer. |
| Glaciofluvial Deposits | SE half | Secondary (A) Aquifer. These are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. |
| Pennine Middle Coal Measures | Full Site | Secondary (A) Aquifer. These are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. |

The site does not lie within 500m of a Source Protection Zone.

*Hydrology*
The nearest named watercourse and surface water feature is the Manchester, Bolton and Bury Canal, 4m to the north of the site at it closest approach.

*Radon*
Information from the environmental database report and BGS Radon Report dated 11th October 2023 indicates the extent of the proposed new building is not in a radon affected area and therefore no radon protective measures are necessary in accordance with BRE Report 211 'Radon – Guidance on protective measures for new dwellings' 2023 Edition.

*UXO Risk*
There is no indication of former military use from the desk study. A non-specialist review of online Zetica mapping indicates the site to be in an area where the bomb risk is a low and no further consideration of UXO is required.

## 2.3 Ground Conditions

*Observed Geology and Groundwater*
From the investigations carried out, the ground conditions can be summarised as below (top down):

- Made Ground comprising topsoil of sandy clay from ground level to 0.20m bgl within the western area of the site.
- General made ground comprising sandy gravelly clay and gravelly sand from ground level to between 0.15m and 2.00m bgl.
- Made ground beneath the former school is typically deeper than the rest of the site, typically present to circa 2.00m bgl, but up to >3.45m bgl.
- Natural superficial deposits predominantly comprising firm to stiff sandy gravelly clay proven to depths between 1.20m and 20.50m bgl, locally interbedded with gravelly sands and sandy gravels at shallow depth in the north-west of the site.
- Solid geology comprising mudstone, siltstone and sandstone proven to a maximum depth of 45.00m bgl.
- Depth to bedrock is variable, ranging from 11.20m bgl to 20.50m bgl.
- Groundwater levels ranging between 0.80m and 14.40m bgl during site works, with groundwater strikes commonly encountered within the top 3.00m bgl.
- Post site works monitoring levels ranging between 0.60m and 8.50m bgl.

*Observations*

During the works undertaken by BSL, observations for both visual and olfactory evidence of contamination were undertaken.

Ash was observed as a moderate constituent within made ground encountered in HP101, TP106, TP107, TP108 and WS104.

A slight hydrocarbon odour was recorded within the granular made ground within TP106, TP107, TP108 and TPSA301 in the eastern area. Geotechnics reported a slight hydrocarbon odour within the granular made ground in DCP05 and DS05.

WS103 was positioned adjacent to Geotechnics borehole BH03, where a hydrocarbon odour and oily sheen were noted beneath the made ground on the natural sands and gravels at 2.00m bgl, however no evidence of visual or olfactory contamination was noted by BSL.

During the post demolition works, which took place alongside the demolition of the site allowing a watching brief, no evidence of gross hydrocarbon contamination was noted.

A suspected asbestos cement pipe was encountered by the demolition contractor and was subsequently removed prior to BSL commencing the post-demolition investigation works. No other evidence of visible asbestos within soils or below the building footprint has been noted to date.

# 3.0 SUMMARY OF RISK ASSESSMENTS

## 3.1 General

The previous site investigation has confirmed the following:

- Localised asbestos, heavy metal and PAH contamination within the made ground.
- Impaction of shallow groundwater in superficial deposits (Secondary A Aquifer and Secondary Undifferentiated aquifer) by metals and minor exceedances recorded in PAHs and petroleum hydrocarbons.

## 3.2 Human Health Risks

Made ground or made ground topsoil underlies the whole site, with heavy metal contamination (arsenic and lead) encountered above residential without homegrown produce screening levels in multiple locations across the site and is considered pervasive throughout the made ground.

PAH contamination is also present within soil samples located in the vicinity of the former school and leisure centre in the eastern area of the site, which are likely attributable to ash and clinker within the granular made ground, with higher concentrations than those in the western part of the site. In addition, asbestos has also been detected at trace (<0.001% w/w) within one sample of made ground, taken from the location of a former asbestos cement pipe which has recently been removed during demolition.

Based on the above, mitigation measures will be required.

It was considered unlikely that the site is being affected by offsite contamination sources as the site is underlain by clay strata and therefore contamination is unlikely to

migrate onto the site.

## 3.3 Ground Gas and Vapours

A summary of the ground gas monitoring carried out by BSL is presented below:

- The available data set exceeds the minimum requirements suggested by the guidance for assessment.
- It is considered that the ground gas concentrations and flows have been monitored to enable a predication of “worst case” conditions; visits undertaken during periods of low and/or falling pressure are within the dataset.
- Although the methane concentrations place the site into CS2 based on the gas screening values, the levels are likely caused by the disturbance and oxygenation of the low organic content within the made ground.
- The organic made ground responsible for the methane concentrations is highly localised, has not been encountered elsewhere on site, and is therefore not representative of the ground conditions as a whole.
- Soft organic clays are geotechnically unsuitable and are likely to be removed anyway as part of the enabling works and earthworks programme likely to be required to create a development platform.
- The typical threshold concentration for carbon dioxide of 5% has been exceeded on a number of occasions within the spot monitoring data.
- Despite the carbon dioxide concentrations, the dataset as a whole is characterised by very low to negligible flow rates and low methane concentrations.
- However, based on the conceptual site model, likely generation sources and detailed assessment via ternary plots, the carbon dioxide concentrations are likely due to microbial respiration, where there is no requirement to increase the characteristic situation simply because the carbon dioxide concentration exceeds 5%.

- The gas flows from the rotary boreholes have been discounted due to the groundwater being above the response zone and creating a piston effect.
- Based on the evidence suggesting an absence of coal mining beneath the site, high ground water table, low permeability superficial deposits, and gas monitoring data, the overall risk from mine gases has been assessed as low.

The site has been assessed as Characteristic Situation 1 (CS1) in respect to permanent ground gases (carbon dioxide and methane) and no specific gas protection measures are required.

### 3.4 Risks to Controlled Waters

Chemical testing of groundwater to date shows exceedance of the Environmental Quality Standards (EQS) and Drinking Water Standards (DWS) for various metals as well as minor exceedances in short chain aliphatic hydrocarbons and PAHs. However, these were not considered to represent a significant risk of pollution of Controlled Waters due to the following reasons:

- There does not appear to be any clear linkage between contaminant concentrations within soils and leachates when compared to exceedances within groundwater.
- No visual or olfactory evidence of gross contamination has been encountered during the site investigations to date.
- There is no indication under present conditions of pollution of controlled waters and conditions following development of the site will not be any worse, indeed they may improve with increased hard cover and water retaining imported soils.
- The post-demolition ground investigation has confirmed the widespread presence of cohesive superficial deposits immediately underlying the shallow made ground, and a consistent perched groundwater body indicating very low permeability of the cohesive soils, as confirmed by infiltration testing.
- Based on the above, the cohesive soils are likely acting as an aquiclude inhibiting lateral and vertical contaminant migration.
- It would be technically challenging and probably disproportionately costly to remove the contaminants from the water to the pre-input stage.
- The above is especially pertinent given the relatively minor exceedances of PAHs and petroleum hydrocarbons in water samples.
- A canal is present to the north of the site, but a pathway is unlikely to exist due to the canal likely being clay lined. The nearest natural watercourse is circa 130m away based on the desk study, and >250m from the isolated highest concentration of PAH contamination in TP307, which provides considerable distance for attenuation and contaminant degradation.
- The site is underlain by low permeability clays, representing a Secondary Undifferentiated Aquifer, which itself is not a sensitive receptor and will inhibit lateral and vertical contaminant migration.
- Whilst the deeper aquifer is classified as a Secondary A Aquifer, due to the presence of coal mining at depth in the surrounding area, groundwater quality within the aquifer is likely already relatively poor when compared to the results of shallow groundwater taken from the boreholes on site.
- The site does not lie within 500m of an SPZ.
- There are no potable (sensitive) water abstractions within 500m.

Based on the above, the site is not considered to pose an unacceptable risk to controlled waters. Therefore, no specific remedial requirements for controlled waters are necessary.

### 3.5 Summary

A summary of the findings of the previous investigations and assessments where a risk is present (i.e. an unacceptable source-pathway-receptor linkage) which requires mitigation is presented in the table below.

| Source | Receptor |
|---|---|
| <- Poses an unacceptable risk to -> | |
| Elevated concentrations of heavy metals (arsenic and lead), PAHs, and localised trace asbestos present within the made ground | Human health / construction workers (Residential without homegrown produce screening criteria adopted) |
| Hydrocarbons above laboratory limits of detection in made ground and groundwater | Water Pipe/ Human Health |
| Soft organic clays in the vicinity of WS101 within the made ground | Human health / Structures |

# 4.0 REMEDIATION STRATEGY

## 4.1 Outline

Based on the site investigations undertaken at the site and the contaminant sources identified within the CSM, the following require appraisal to determine the most suitable remedial options:

- General Made Ground – Pervasive contamination in the form of arsenic, lead, PAHs and asbestos has been identified within the made ground concentrated in the east of the site, presenting a risk to human health (site end users).
- Soft organic clays in the vicinity of WS101 within the made ground, presenting a potential ground gas risk.

## 4.2 Site Remediation Requirements.

Following an options appraisal in the Remedial Strategy (JM/C5394/12387 Rev A), remedial measures were selected for each of the identified sources Full details are available within the Remedial Strategy, with the key requirements summarised in the table below.

| Source | Contaminants of Concern | Remediation Method | Further Details / Remedial Requirements |
|---|---|---|---|
| Made Ground Organic Clays | Methane | Source Removal | Organic clay was identified locally within WS101 and is considered to be an isolated source of the elevated methane concentrations in this area of the site. Given the data available for the site beneath the building footprint, the successful removal of the source from a ground gas perspective (methane) is considered to be viable.<br>In addition, the organic soils are not considered to be suitable for building on/may result in differential settlement of gardens from houses. Given this, it is recommended that this material is excavated and removed for geotechnical purposes, and this would therefore successfully removal the source of methane.<br>See drawing ref. C5394/07 for the approximate extent of the soft organic material. |
| Made Ground | Arsenic, Lead, PAHs, trace asbestos | Installation of Clean Cover System | In soft landscaping areas, a 450mm cover system comprising "clean" validated topsoil/subsoil should be installed.<br>In the eastern half of the site, where the highest PAHs were encountered and trace asbestos in one isolated location, a warning geo-membrane or break layer should also be installed at the base of the clean cover system. |

In addition to the specific remedial requirements listed in the tables above which are intended to mitigate the risks from known sources, it was recommended that a watching brief be maintained during the groundworks and construction for any evidence of contamination and BSL consulted for advice.

With reference to the remedial requirements, "clean" soils are defined by the site-specific Human Health Remediation Targets which are derived from C4SLs/S4ULs for a residential without plant uptake end use.

The human health remediation targets are enclosed in Appendix A.

*Materials Management Plan*

In order to enable the importation, excavation and re-use of materials on site as part of the enabling works under the current regulatory regime and waste regulations, a Materials Management Plan was produced and declared to CL:AIRE. The Materials Management Plan is presented in Appendix F.

# 5.0 SITE REMEDIATION AND VALIDATION

## 5.1 General

The remediation process was undertaken over several stages and site visits were undertaken between the dates of 24th February 2025 and 28th May 2026 as of writing this report.

A summary of the site works undertaken in accordance with the Remedial Strategy (report ref. JM/C5394/12387 Rev A) is detailed below.

## 5.2 Source 1: Made Ground Organic Clays

During the initial site investigation undertaken by BSL in August 2023, an area of localised organic clay was encountered within WS101. This was considered to present an isolated source of ground gas and during monitoring, elevated methane was recorded within the borehole monitoring well, therefore it was proposed this material was delineated and removed from site.

Prior to the removal of the material, BSL attended site in November 2023 to undertake additional trial pits in the area surrounding of WS101 in order to survey the approximate extent of the organic material. This is presented on the WS101 Organic Matter Plan (drawing ref. C5394/07). This exercise was undertaken to inform the groundworks contractor (Chartrange) the location of the organic material, which in turn would avoid the contractor from disturbing the material during the enabling phase prior to the removal.

BSL initially attended site on 26th February 2025 to undertake a watching brief and supervise the removal of the organic material, but due to poor ground conditions from wet weather, the exercise was abandoned until the following day as seen on the 26.02.25 Site Attendance Record in Appendix B.

During the site visit on 27th February 2025, the extents of the organic material previously defined by BSL were marked out by a Chartrange engineer. The organic material was encountered to 1.10m bgl across the majority of the target area, with a strong organic odour and anthropogenic inclusions of brick, metal, concrete and plastic. The material was excavated until the visually clean brown mottled grey slightly gravelly slightly sandy clay was exposed on both the base and the sides of the excavation as seen on the 27.02.25 Site Attendance Record in Appendix B. Following the excavation of the organic made ground, the material was stockpiled to the west of the excavation area.

The total area and volume of the excavation for the organic material was surveyed by Chartrange. The recorded area of the excavation was 240m$^2$, with the volume of material being 312m$^3$.

The organic material was taken offsite by Viridor Waste on 4th March 2025 to Pilsworth Landfill (Pilsworth Rd, Unsworth, Bury BL9 8QZ). Waste Transfer Notes can be found in Appendix C.

As the area of the organic material was located within the proposed building footprint as shown on the Exploratory Hole Location Plan (drawing ref. C5394/02 Rev D), the excavation was backfilled with imported Class 6 material in order to form the vibro stone column working platform. The imported Class 6 material is discussed in the section below.

## 5.3 Imported Class 6 Materials

As part of the enabling works and earthworks at the site, there was a requirement for import of circa 6000m$^3$ of Class 6 material for use in the piling mat, access roads build-up and beneath hardstanding.

***Imported Recycled Class 6 (6F2) Material***

Initially in February 2025, 2469.28m$^3$ of Class 6 (6F2) material was imported to site by Chartrange for use in the vibro stone column piling mat in the north section of the site beneath the proposed building footprint. BSL attended site on 24th February 2025 in order to take three samples of the material in line with the testing frequency (1:1000m$^3$) outlined in Appendix A of the BSL Remedial Strategy (ref. JM/C5394/12387 Rev A).

Prior to importation, the groundworks contractor also completed testing on the material (Envirolab report ref. 25-00494-1 and 25-00497-1) which indicated compliance with the human health remediation targets based on S4ULs for residential without plant uptake.

The results of the post-import testing when compared against the site import criteria showed that the concentrations of PAHs within the Class 6 (6F2) material were marginally elevated. Although the results showed a marginal elevation of PAHs, BSL were of the opinion that there was not risk to human or environmental health from this source.

Following this, BSL contacted Rebecca Jones at Bury Council on 11th March 2025 and presented the below rationale for keeping the impacted Class 6 material onsite;

- The concentrations of PAHs only marginally exceed the S4ULs for a residential end use which are highly conservative.
- The material will largely be used beneath hardstanding and buildings. Where this is not the case, there is already a requirement to implement a clean cover system in all new soft landscaping areas which will be 450mm in total thickness. Therefore, any pathways to human health of end users will be effectively broken.
- A cover system was already required on the site due to the made ground already present containing elevated PAHs, as well as trace asbestos (localised) and heavy metals, therefore the site was already considered to have been impacted with these contaminants and is not being made worse by using the 6F2.
- The concentrations of PAHs within some samples of the site-won made ground are significantly greater than those within the imported 6F2, as detailed in the Phase II Geo-environmental Assessment Report (report ref. FS1013-BSL-XX-XX-T-O-1000 REV P05).
    - This is important because it is reflected within the human health remediation targets, which differ for site-won versus imported fill to allow re-use of site won made ground beneath areas of hardstanding, roads, buildings etc. Once again, given this is already effectively permitted for site-won made ground which is already impacted with PAHs, the usage of the imported 6F2 does not materially affect the remedial measures required for the site and does not make the site any worse than prior to development.
    - With respect to wider site impacts such as risk to controlled waters and the environment, retention of the material on site is not considered to impact the existing conceptual site model given the nature of the existing made ground and existing contaminant concentrations on site
- Since the material has already been imported, removal of the material from the site would be highly unsustainable and involve a significant volume of vehicle movements to/from the site, and on the balance of risk this is not considered to be proportionate when compared to retaining the material on site.

Following the above correspondence with Bury Council, Rebecca Jones confirmed acceptance on 14th March 2025 of the rationale presented by BSL in order to retain the Class 6 (6F2) material onsite.

Prior to receiving the results of the first batch of testing for the imported Class 6 (6F2) material, an additional 1581m$^3$ of material was imported to site, totalling approximately 4000m$^3$ of material imported in total. In order to satisfy the testing frequency requirements, BSL attended site on 18th March 2025 to take one sample of the imported 6F2 in situ. The details of this visit can be found in the 18.03.25 Site

Attendance Record in Appendix B. The results of this testing also showed exceedances of PAHs (i2 Analytical report ref. 25-013915).

The imported recycled 6F2 was imported from the below sources;

- Wharf Street, Dukinfield, Cheshire, SK16 4NJ – Chartrange Ltd.
- Rondin Road, Ardwick, Manchester, M12 6BF – P McGuinness and Co Ltd.

The ticket reference and details of import can be found in Appendix C.

Following the use of the imported Class 6 (6F2) material in the north of the site in the piling mat, once the vibro piling was complete, excavation of the footings within the building footprint were undertaken. The arisings of the Class 6 (6F2) material from these footings totalled a volume of 1200m$^3$ with the rest of the material remaining in-situ below the building footprint. The arisings were then used in the build-up of the access road and roundabout in the south section of the site as detailed in the BSL Earthworks Validation Report – Highways (report ref. AH/C5394/14880).

***Imported Quarried Class 6 (6N/6F) Material***

As mentioned previously, Class 6 material was also required onsite for the earthworks build-up of the access road in the south section of the site. As the volume of the arisings from the footings detailed above was not sufficient for the level of build-up, there was the requirement for more material to be imported.

Quarried Class 6 materials were imported from the following source;

- P.P. O'Connors - Fletcher Bank Quarries, Fletcher Bank, Ramsbottom, Bury, BL0 0DD.
- Travis Perkins – Dove Holes Quarry, Dale Rd, Dove Holes, Buxton SK17 8BH.

Delivery tickets can be found in Appendix C.

The volumes of the imported material from the above sources are presented below;

| Company | Source | Volume (m$^3$) | Certificate of Provenance (Y/N) | Delivery Ticket (Y/N |
|---|---|---|---|---|
| P.P. O'Connors | Fletchers Bank | 976 (122 loads) | Y | Y |
| Travis Perkins | Dove Holes | 960 (120 loads) | Y | Y |

As this material is sourced directly from quarries, there is no requirement for this material to be declared on the MMP under DoWCoP. Certificates of Provenance are provide in Appendix D.

## 5.4 Site Won Class 6 Materials

As part of the enabling working onsite, the original school/leisure centre building was demolished prior to the main site works being undertaken. As a result, the remaining suitable demolition materials were re-purposed for re-use as site won Class 6 material. A total volume of 1250m$^3$ of site-won 6F2 was used as part of the build-up of the piling mat in the north section of the site.

BSL attended site on 18th March 2025 and took three samples (minimum required in line with BSL Remedial Strategy) of the site won made ground, stockpiled in the central storage yard onsite, as shown

in the 18.03.25 Site Attendance Record. The testing results in two of the samples taken from the site won 6F2 stockpile showed elevated levels of PAHs in comparison to the screening criteria (Residential without homegrown produce). Although the results showed levels above the assessment criteria, the levels were in the same magnitude of those also shown in the imported Class 6 material. Therefore, as stated in the rationale for keeping he imported Class 6 material onsite, the same also applies for the site won 6F2. BSL consider that the site-won 6F2 does not present a risk to human or environmental health due to the fact that the material will largely be used beneath hardstanding and buildings. Where this is not the case, there is already a requirement to implement a clean cover system in all new soft landscaping areas which will be 450mm in total thickness. Therefore, any pathways to human health of end users will be effectively broken. Additionally, the concentrations of PAHs within some samples of the site-won made ground are significantly greater than those within the site won 6F2 and therefore as the 6F2 originated from site, it will not be making the ground conditions any worse in respect to contamination.

## 5.5 Site Won Topsoil

As part of the proposed development, there are a number of soft landscaping areas within the site, namely along the western boundary, north-east corner and the south section of the site. As part of the BSL Remedial Strategy (JM/C5394/12387 Rev A) there is a requirement for the installation of a clean cover system in any soft landscaping/POS areas onsite due to the contamination within the made ground (heavy metals, PAHs & asbestos).

As part of the clean cover system, a layer of topsoil is required as part of the formation. Initially, it was proposed that all of the required topsoil for the clean cover system would be imported. Instead, in order to adopt a more sustainable approach, it was proposed that the existing topsoil in the west section of the site would be tested in order to assess the potential for retaining onsite and re-using as part of the clean cover system.

The initial topsoil strip recorded a total volume of 4237m$^3$, of this 2407m$^3$ was disposed of offsite at Viridor Pilsworth Landfill. 1830m$^3$ was retained onsite, as detailed below. Tickets for offsite disposal are presented in Appendix C. The 2407m$^3$ removed from site was disposed due to space constraints onsite, which restricted the amount of stockpile space available onsite.

***Stockpile TS1***

Following the topsoil strip, a stockpile of the site won topsoil was stockpiled in the west section of the site. BSL attended site on the 12$^{th}$ March 2025 in order to sample the stockpiled topsoil. The total volume of the stockpile was recorded to be 1830m$^3$, a total of 15 samples were taken whilst onsite, with 11 were tested in line with the required testing frequency of 1:150m$^3$ for a site-won brownfield source as outlined in the BSL Remedial Strategy (JM/C5394/12387 Rev A). The full details of the site visit are shown in the 12.03.25 Stockpile Validation Record.

The results of the testing showed that 10 out of the 11 samples tested were suitable for use in the clean cover system, the results are show in Appendix B. The sample which was not suitable for use was TS101 in the southern side of the stockpile, and showed a positive identification for trace asbestos, as well as a marginal exceedance for copper in respect to the screening criteria.

As the majority of the soils in the topsoil were shown to be suitable for use, in order to retain the stockpile onsite, BSL proposed remedial action in the form of source removal for the material in proximity to the TS101 sample.

BSL attended site on 1st April 2025 in order to undertake source removal of the asbestos impacted soils in the vicinity of TS101, as seen on the 01.04.25 Site Attendance Record. A 3.0m x 2.5m area down to 2.0m into the stockpile was excavated during the site visit, with 5 samples taken, one from each of the sides and one sample from the base of the pit. The resulting arisings from the stockpile were segregated to the south of the main stockpile, ready to be removed from site.

The results showed no positive identification for asbestos in any of the samples on the extent or base of the excavation, therefore it is considered that the asbestos impacted soils were successfully removed from the topsoil stockpile. A volume of approximately 20m$^3$ of topsoil was removed from TS1, the waste transfer notes for this material can be found in Appendix C.

This material has subsequently been used within the clean cover system to the north of the building footprint and to the west of the proposed car park.

***Stockpile TS2***

As part of the enabling works for the earthworks relating to the highways build-up in the south section of the site, topsoil was stripped off and stockpiled to the south of the main storage yard onsite, to the east of the main access road, as shown on the TS2 Stockpile Validation Record. This stockpile comprised of 175m$^3$ of topsoil described as a dark brown slightly gravelly clayey sand with moderate organic matter content.

In line with the BSL Remedial Strategy (JM/C5394/12397 Rev A) three samples were taken from TS2 on 24th June 2025. The results show that there were multiple exceedances of PAHs in the TS2 topsoil stockpile, detected in all three samples as show in i2 Analytic report ref 25-034220.

Therefore, the topsoil is not suitable for use as topsoil in the clean cover system but the material may be used as general fill within POS areas below the proposed clean cover system. Records from the groundworks contactor show that this material was used as general fill below the clean cover system in the area around the new access road.

***Stockpile TS3***

Additionally, as part of the enabling works for the earthworks relating to the highways build-up in the south section of the site, topsoil was stripped off and stockpiled to the west of the area of the proposed roundabout, to the south of TS1 as shown on the TS3 Stockpile Validation Record.

This stockpile comprised of 585m$^3$ of topsoil described as a dark brown gravelly clayey sand with moderate organic matter content and anthropogenic inclusions of brick, concrete, metal, plastic and fabric.

Although this stockpile was not considered suitable for use in the clean cover system due to the presence of anthropogenics within the material, BSL undertook testing in order to confirm suitability for re-use in areas below the clean cover system as general fill.

The results show that there were no exceedances of contaminants within this stockpile (i2 Analytical report 25-033751) in comparison to screening criteria for human health (residential without homegrown produce). Although as stated above, the material is not suitable for use as topsoil within the clean cover system due to the large amount anthropogenic inclusions and made ground within the stockpile.

BSL were informed by Chartrange that TS3 had been used as general fill below the cover system in the north-eastern corner of the site, as shown on the Validation Location Plan (drawing ref. C5394/17).

Although when BSL attended site on 13th and 21st November 2025 to validate the depth of the topsoil onsite in this area, the topsoil appeared to have been mixed with the made ground general fill below, resulting in the failure of the clean cover system in this area of the site. Full details of this can be found in the Clean Cover Validation Report – Northern POS (ref. JL/C5394/14971 issued December 2025).

The above material, which failed on the initial clean cover system validation visit, has since been removed and instead used as general fill below the clean cover system in the north-east section of the site. Importation of new topsoil for this section of the site, as well as follow up clean cover validation visits are discussed in sections 5.8 and 5.9 below.

## 5.6 Site Won Subsoil

***Stockpile SS1***

As part of the enabling works for the earthworks in the north section of the site, a cut/fill program was undertaken which allowed for the reduction of levels in the north-west section of the site and placement of material for stabilisation in the north-east section of the site within the proposed MUGA/sports pitches. Full details of the earthworks undertaken onsite can be found in the BSL Earthworks Validation Report (ref. PH/C5394/14753).

During the cut works, a stockpile of subsoil was produced from the material in the north-west area of the site, described as a dark brown slightly gravelly slightly sandy clay with anthropogenic inclusions of sandstone, mudstone, brick, concrete, glass and wood. This stockpile was recorded with a volume of 620m$^3$.

This material is proposed to be used as general fill within the upper 300mm of the MUGA pitches area which is the current location of the cabins/car park. Chartrange has undertaken relevant geotechnical testing and organic matter testing on this material, as it will be stabilised in the MUGA, the testing and validation of this material for earthworks purposes fall under the responsibility of Earth Tech Solutions and Chartrange.

BSL attended site on 1st April 2025 to take samples of the above material in order to determine the chemical suitability for re-use onsite. Three samples were taken - SS101 (west), SS102 (centre) and SS103 (east) as shown on the 01.04.25 Stockpile Validation Record.

The results of the testing showed that two of the three samples tested positive for trace amounts of asbestos (SS102 & SS103) – i2 Analytical report 25-016602. Although there was a positive identification of asbestos within these soils, they are not for re-use within the clean cover system, therefore it was considered that these soils can be used in the earthworks build up in the MUGA/sports pitches in the north-east of the site under hardstanding or under the proposed cover system.

***Stockpile CS3***

During the enabling works of the earthworks for the access road works, a subsoil stockpile was produced from the material cut from the proposed area of the roundabout in the west section of the site with a volume of 250m$^3$.

BSL attended site on 26th June 2025 to validate the chemical suitability for re-use within the batter alongside the engineered build-up of the access road. BSL took three samples of this material (CS301, CS302 & CS303) described as an orangish brown slightly gravelly slightly sandy clay. The material was generally representative of subsoil and was described as being free of anthropogenic inclusions.

The testing revealed that there were no exceedances of contaminants in respect to human health (residential without homegrown produce) – i2 Analytical report 25-033751. Therefore this material is

considered suitable for re-use onsite within the batter for the access road. Further details of the testing undertaken on CS3 can be found in the 24.06.25 CS3 Stockpile Validation Record.

***Stockpile CS5***

As part of the enabling works to the west of the proposed building footprint, a subsoil stockpile was produced, comprising of natural cohesive material. The stockpile was calculated to be approximately 500m$^3$, as detailed in the 31.03.26 Stockpile Validation Record. It was proposed that this stockpile was to be used as part of the clean cover system. Subsequently three samples were taken in line with the 1:150m$^3$ testing frequency.

The testing revealed that there were no exceedances of contaminants in respect to human health (residential without homegrown produce) – Chemtech report 26-03956. Therefore this material is considered to be suitable for use as subsoil within the clean cover system onsite. As of writing this report, this material is currently still stockpiled and awaiting placement into the clean cover system in the west section of the site.

In addition to the samples taken in the stockpile, 400m$^3$ of natural subsoil was left in-situ as part of the clean cover system in the north-west section of the site. As such, four samples were taken from these natural in-situ soils, in order to confirm suitability. Locations of these samples are detailed on the 31.03.26 Stockpile Validation Record.

The testing revealed that there were no exceedances of contaminants in respect to human health (residential without homegrown produce) – Chemtech report 26-03956. Therefore this material is considered to be suitable for use as subsoil within the clean cover system onsite and can be left in-situ.

## 5.7 Site Won Hydrocarbon Impacted Soils

During the post-demolition site investigation of the southern section of the site in May 2024, BSL encountered an area of made ground classified as hazardous waste in TP307, shown on the Exploratory Hole Location Plan (drawing ref. C5393/02A). The testing results showed elevated levels of PAHs above the screening criteria for residential without homegrown produce within the made ground, as well as being classified as hazardous in reference to Total Petroleum Hydrocarbons.

Following the above findings, BSL re-attended site to delineate the area of hazardous soils on 7$^{th}$ August 2024 by undertaking 8 hand pits and trial pits in the area surrounding the initial sample location, as shown on the TP307 Hazardous Soils Extents Plan (drawing ref. C5394/12). During the sampling for this only HP404 classified as hazardous, which was located close to the original location of TP307.

Following the above delineation, BSL produced a letter report titled - Supplementary Delineation and Waste Classification Testing in the area of TP307 (report ref. JEM/C5394/13425 Rev A). In conclusion the letter report stated that based on the waste classification database assessment, the made ground soils in all directions of TP307 and HP404 have been classified as non-hazardous. Therefore, soils between the delineated points and TP307 have been classified as hazardous waste requiring pre-treatment prior to being accepted at a hazardous landfill site based on WAC testing carried out during the previous scope of works (see BSL report ref. FS1013-BSL-XX-XX-T-O-1003-P03). As the samples of made ground from adjacent locations HP401, HP402, HP403, HP405, and TP403 have been classified as non-hazardous, the lateral extents of the hotspot is considered to have been successfully delineated, as highlighted on drawing C5394/12A. It was recommended that if any future groundworks in the vicinity are required, this should be completed under a watching brief by a suitably qualified geo-environmental engineer such as BSL.

In line with the above recommendations, during the works for the access road in May & June 2025, BSL attended watching briefs in the area of the made ground classified as hazardous waste for classification

purposes. Initially, it was proposed that any hazardous hydrocarbon impacted soils would be taken offsite. The soils were originally described as hydrocarbon material, however no hydrocarbon odours where noted. In addition, Photo-Ionisation Detection (PID) monitoring was undertaken on all environmental soil samples and recorded PID results of 0.0ppm, indicating that no significant volatile vapour contamination was present. Further information can be found in the Stockpile Validation Record 14.05.25. It should be noted that the hydrocarbons initially detected in the initial post-demolition site investigation were not elevated above the screening criteria for human health and were only classified as hazardous in respect to waste.

During the watching briefs for the excavations in the south section of the site within the area of TP307, which comprised of excavations for drainage and service runs, more made ground was encountered than originally anticipated. In order to adopt a more sustainable approach onsite, it was proposed that BSL do additional testing on the made ground arisings from the service excavations and the area around TP307 to determine suitability for re-use instead of taking the material offsite, which was both more economical and sustainable overall.

BSL initially undertook sampling on this material, of which the details can be found in Stockpile Validation Record SP2 dated 14th May 2025. Following the initial testing, BSL returned to the site to undertake further assessment sampling on 4th June 2025. The testing undertaken on these visits identified elevated levels of PAHs, specifically benzo(a)pyrene (in respect to commercial end-use scenarios). Following this, it was recommended that further analysis and assessment of the made ground be carried out to fully confirm the risk to site end users.

The aim of this investigation was to identify and further assess the levels of contamination associated with the made ground, determine potential suitable re-use scenarios and provide remedial recommendations, if required. If the material can be reused, it has been proposed that it be used under the new road/behind a small retaining wall/beneath POS in the same general area where the material was originally removed.

The results from the chemical analysis returned BaP concentrations of 69, 81, 71, 52, 17, and 6.5 mg/kg, which showed multiple exceedances for re-use onsite in respect to the BSL Remedial Strategy.

Following the results, in order to retain the soils onsite, BSL undertook a Geo-Environmental Letter Report - Made Ground Analysis and Assessment (report ref. PH/C5394/14449). As part of this assessment, statistical analysis was undertaken on the data obtained through the sampling visits.

The statistical analysis indicated that;

- The mean concentration is 49 mg/kg.
- There is an 90% chance that the true mean concentration of this contaminant in the sampling zone lies in the range of 24.07 mg/kg to 74.76 mg/kg.
- There is a 92% chance that the true mean concentration of this contaminant in the sampling zone will not lie outside the range of 21.86 mg/kg to 76.97 mg/kg.

Based on the testing and further assessments carried out, it would appear that the made ground is chemically suitable to remain on site in a commercial end use scenario and therefore means it may be used below hardstanding in outdoor areas at the proposed school site. Full details can be found in the Geo-Environmental Letter Report - Made Ground Analysis and Assessment (report ref. PH/C5394/14449).

This letter was submitted to Rebecca Jones at Bury Council on 24th July 2025. Rebecca Jones then confirmed acceptance of letter on 30th July 2025.

As of writing this report the volume of material generated from the arisings in the south section of the site is 250m$^3$. The material is currently stockpiled in the storage area in the centre of the site pending use below hardstanding areas in a later phase of the development.

## 5.8 Importation of Clean Cover System Soils

As part of the installation of the clean cover system in the soft landscaping areas onsite, there is a requirement to import topsoil and subsoil. As of May 2026, 1300m$^3$ of topsoil has been imported to site for use within the Phase 1 planning application area from the below source, imported by Beech Landscape Ltd;

- SED Services Ltd - Landgate Farm, Land Gate Ln, Ashton-in-Makerfield, Wigan WN4 0EJ.

| Company | Source | Source Type | Sampling Frequency | Volume (m$^3$) | Chemical Testing Acceptance (Y/N) | Delivery Ticket (Y/N) |
|---|---|---|---|---|---|---|
| Beech Landscape Ltd | SED Services – Landgate Farm | Recycled | 1:150m$^3$ | 1300 | Y | N* |

*Delivery tickets pending, report will be updated upon receipt.

BSL initially undertook three samples at source on the 26th January 2026 in order to confirm suitability of the topsoil prior to importing to site. This material was stockpiled separately for testing purposes at source to increase the confidence of testing continuity.

The full details of the visit can be found in the 26.01.26 Stockpile Validation Record.

The testing revealed that there were no exceedances of contaminants in respect to human health (residential without homegrown produce) – Chemtech report 26-00987. Therefore, this material was considered to be suitable for import to site, with further confirmatory testing to be undertaken onsite once imported to confirm suitability for use in the clean cover system.

BSL then attended site on 16th March 2026 in order to undertake the remainder of the required onsite sampling. At this stage, a total of 1300m$^3$ of topsoil has been imported to site, requiring a total of 9 samples required at a 1:150m$^3$ sampling frequency.

As part of the 16.03.26 visit, 6 samples were taken both from stockpiles and from surface where the topsoil had already been placed onsite. Full details and sample locations can be found in the 16.03.026 Stockpile Validation Record.

The testing revealed that there were no exceedances of contaminants in respect to human health (residential without homegrown produce) – Chemtech report 26-03245. Therefore, this material was considered to be suitable for use in the clean cover system as topsoil.

No further import of topsoil is required for the Phase 1 application area, however further import of topsoil and subsoil will be required as part of the Phase 2 area and this report will be updated upon completion of testing of this material.

## 5.9 Installation of Clean Cover System / Break Layer

It should be noted that at this stage, the clean cover system validation is ongoing for the Phase 1 area of the site and this report will be updated once complete.

As detailed in the Remediation Strategy (report reference JM/C5394/12387 Rev B), the clean cover system in soft landscaping areas should comprise (top down):

- 450mm "clean" validated topsoil/subsoil.
- Warning barrier membrane/geotextile within the eastern section of the site as per the Clean Cover System and Geotextile Plan (drawing ref. C5394/15 Rev B).

*Geotextile Warning Membrane*

As part of the Remediation Strategy, it was noted that concentrations of PAHs were notably higher in the eastern half of the site in the vicinity of the former school and leisure centre, as well as asbestos fibres at trace concentrations in one location. Therefore, in these areas, an engineered element to the cover system, such as geotextile marker layer at the base and / or a coarse granular 'hard dig' layer, should be included to reduce soils mixing particularly due to the notable concentrations of Benzo(a)pyrene recorded within the made ground. In this case, a warning geotextile membrane will be placed between the made ground and the clean cover system soils, but is not required where natural soils are present which do not have elevations of PAHs, as shown on the Clean Cover System and Geotextile Plan (drawing ref. C5394/15 Rev B).

The geotextile warning membrane data sheet is presented in Appendix G.

*Chemical suitability of cover system components*

The requirements for testing, as outlined within the approved Remedial Strategy, are detailed below:

| Material | Source | Testing Suite | Sampling Frequency |
|---|---|---|---|
| Topsoil/Subsoil | Greenfield | BSL Default Suite: Metals and PAHs<br>Asbestos Screen | 1 sample* per 250m$^3$ (minimum of 3 samples per source) |
| Topsoil/Subsoil | Brownfield / Recycled | BSL Default Suite: Metals and PAHs<br>TPH CWG<br>Asbestos Screen | 1 sample* per 150m$^3$ (minimum of 3 samples per source) |

*Suite of analysis dependent on source of soil.

*Testing Regime and Results*

The results of testing for the topsoil and subsoil used within the clean cover system onsite has been discussed in the above sections, a summary of the testing undertaken to date is presented in the below table:

| Material | Volume (m$^3$) | No. of Samples | Sampling Frequency | Passed Screening Criteria |
|---|---|---|---|---|
| Site Won Topsoil | 1830 | 15 | 1:150m$^3$ | Y |
| Site Won Subsoil | 900 | 6 | 1:150m$^3$ | Y |
| In-situ Subsoil | - | 3 | Minimum 3 samples | Y |
| Imported Topsoil | 1300 | 9 | 1:150m$^3$ | Y |

The chemical testing results are presented in Appendix C.

In accordance with the requirements of the Remedial Strategy, all the available results from the above table were compared with the Generic Risk Assessment Criteria Values for Residential without Plant Uptake, which are presented in Appendix A.

The concentrations of metals, asbestos and PAHs in the topsoil/subsoil samples did not exceed the Human Health Remedial Targets and therefore are considered to be chemically suitable for use on site.

*Depth Validation – 13.11.25*

Following placement of the site won topsoil in the northern area of POS, BSL arranged a visit for validation of the clean cover system, which included the area to the north of the building footprint and to the north of the MUGA pitch in the north-east section of the site, as per the Validation Location Plan (drawing ref. C5394/17).

BSL were informed prior to the visit that the warning barrier membrane/geotextile had not been installed below the 450mm clean topsoil layer, as specified on the Clean Cover System and Geotextile Plan (drawing ref. C5394/15 Rev B), however we were informed all made ground had been removed from this area prior during earthworks prior to placement.

As the membrane was only required as a barrier between the contaminated made ground and clean cover material, it was determined that if in the absence of made ground, the membrane would not be required beneath the clean cover system.

BSL visited site on 13th and 21st November 2025 to complete 14 trial holes in the POS to a depth of between 0.8m to 1.5m bgl, completed on a 15m$^2$ grid pattern. These were completed to determine the depth of the clean topsoil, to demonstrate the made ground had been removed during earthworks below the cover system and to obtain samples to determine the chemical suitability of the underlying natural soil.

Due to the presence of made ground material at the surface and below the clean topsoil in the eastern half of the validated POS area, it was considered that the clean cover system was not sufficient. However, the topsoil in the western half of the validated area was underlain by natural slightly gravelly sandy clay, and therefore would not require a membrane. The areas where natural and made ground were encountered during this visit are highlighted on the Validation Location Plan (drawing ref. C5394/17).

The results of the depth validation in the western most six trail holes (TP401 to TP406) where natural subsoil was encountered beneath the cover system is presented below;

| Location Number | Depth/ Stratum | Pass / Fail |
|---|---|---|
| TP401 | 0-400mm – Topsoil<br>400mm – Natural clay | Pass |
| TP402 | 0-400mm – Topsoil<br>400mm – Natural clay | Pass |
| TP403 | 0-600mm – Topsoil<br>600mm – Natural clay | Pass |
| TP404 | 0-600mm – Topsoil<br>600mm – Natural clay | Pass |
| TP405 | 0-400mm – Topsoil<br>400mm – Natural clay | Pass |
| TP406 | 0-700mm – Topsoil<br>700mm – Natural clay | Pass |

Although the clean cover system measures 400mm within 3 of 6 trail holes rather than the specified 450mm, a variance in thickness is considered acceptable in the context of the guidance which allows minor deviations in individual soil layer thicknesses, provided the overall system still achieves its functional objectives, and the addition of approximately 30mm of grass cover will increase the total depth of cover.

Furthermore, the topsoil layer maintains a minimum thickness of 100mm in line with warranty provider standards. Taken together, these factors support the conclusion that the clean cover system remains

compliant with the intent of the requirements and continues to provide an effective barrier to be protective of human health.

Three samples of the natural clay beneath the cover system (samples TP401, TP403, and TP406, i2 analytical testing report reference 25-063521) were tested for a suite of heavy metals, speciated PAH, TPH, and asbestos screening. The results were compared to the Generic Risk Assessment Criteria Values for Residential without Plant Uptake as set out in the BSL remedial strategy. The Laboratory results and human health risk assessment can be found in Appendix B.

The finding from this visit were compiled in the Clean Cover Validation Report – Northern POS (report ref. JL/C5394/14971 issued December 2025.) and submitted to Rebecca Jones at Bury council for approval. Acceptance of the validation report was confirmed by Rebecca Jones on 15th January 2026.

Following acceptance of the report, the client was informed that the north eastern portion of the validation area which failed will need to be re-installed with a geotextile warning membrane. The Clean Cover System and Geotextile Plan (drawing ref. C5394/15 Rev B) was also updated to include the north-western area within the zone which does not require a geotextile membrane.

*Depth Validation – 16.04.26*
BSL visited site to validate the depth of the clean cover system on 16th April 2026 in the north-east section of the site, including the area which previous failed, as detailed in the above section. The locations of the clean cover validation pits are presented on the Clean Cover System Validation Plan (drawing ref. C5394/19). A hand dug trail pit was excavated to at least 450mm below ground level in six locations by a suitably qualified Geo-Environmental engineer.

| Location Number | Depth/ Stratum | Pass / Fail |
|---|---|---|
| TP501 | 0-450mm – Topsoil<br>450mm – Geotextile Warning Membrane | Pass |
| TP502 | 0-500mm – Topsoil<br>500mm – Geotextile Warning Membrane | Pass |
| TP503 | 0-500mm – Topsoil<br>500mm – Natural clay | Pass |
| TP504 | 0-600mm – Topsoil<br>600mm – Geotextile Warning Membrane | Pass |
| TP505 | 0-500mm – Topsoil<br>500mm – Geotextile Warning Membrane | Pass |
| TP506 | 0-500mm – Topsoil<br>500mm – Geotextile Warning Membrane | Pass |

During the visits the installation of an orange warning geotextile was evident in all areas where required, including those which failed on the previous visit.

The geotextile used was the Terra Stop Orange Woven Indicator Geotextile from Miers. The data sheet is presented in Appendix G.

A photographic record of the depth validations is presented in Appendix H.

As of May 2026, the installation of the clean cover system within the Phase 1 and Phase 2 areas are ongoing and this report will be updated upon completion.

## 5.10 Installation of Geogrid – Historical Coal Mining Risk

As part of the initial site investigation undertaken by BSL and Geotechnics, a potential risk was identified due to the site being within a high risk development area in respect to historical coal mining as highlighted in the BSL Coal Mining Risk Assessment, ref: PH/C5394/12312, issued August 2023.

The Coal Mining Risk Assessment (PH/C5394/12312) undertaken by Brownfield Solutions Ltd has identified that a total of eleven coal seams are recorded to be present below the site, their depths ranging from outcropping directly below the superficial deposits to 246m below the site.

Geotechnics completed an initial ground investigation comprising drilling of 4 No. rotary boreholes in the vicinity of the proposed building, and did not identify any evidence of shallow coal workings or unrecorded mine entries up to 45m below the site, no loss of flush or voids were encountered during the drilling.

Following the initial investigation by Geotechnics, to increase confidence in the existing assessment, BSL carried out a detailed mining investigation comprising the drilling of 8 No. rotary open holes within the footprint of the proposed building to further investigate the potential for shallow unrecorded mine workings.

Following the above investigations by BSL and Geotechnics, the overall risk from shallow unrecorded mine workings was considered to be low and no further action is required below the proposed structure, as stated in the BSL Phase II Geo-Environmental Assessment Report, ref. FS1013-BSL-XX-XX-T-O-1000 Rev P05 issued July 2024.

Although the risk was considered to be low below the proposed building, limited site investigation was undertaken within the high risk development area across the wider site, therefore in order to mitigate the risk of potential subsidence within the roads and hardstanding areas, it was proposed that a geogrid membrane would be placed below hardstanding areas.

Photographic evidence has been provided by the groundworks contractor showing the installation of the geogrid and are presented on the Geogrid Installation Photoboard in Appendix H.

The details of the geogrid used is presented below:

- Access road area (AE Yates) - InterAx® NX850™ Geogrid.
- Car Park Area (SEL Environmental) - WASP Heavy Duty Geotextile WASP02106

Within the car park area undertaken by SEL Environmental, a heavy duty geotextile was chosen instead of a geogrid. In line with CIRIA C758, a geotextile falls under the category of a ‘Geosynthetic’ which is a suggested and appropriate means of mitigating the surface effects of mine workings

The MD tensile strength of the heavy duty geotextile is recorded as 24kN/m, which is considered to be of high strength, for comparison the geogrid MD tensile strength is recorded as 20kN/m.

Additionally two boreholes undertaken by Geotechnics within the car park area and hardstanding area to the north-east (BH01, BH02 & BH03A) did not record any evidence of mine workings in the form of broken ground or voids.

Therefore the geotextile is considered to be a suitable alternative to the geogrid in this section of the site.

Technical data sheets are presented in Appendix G.

As of May 2026, the installation of the geogrid is ongoing, this report only covers the geogrid installation within the Phase 1 handover area.

### 5.11 MMP Verification Reporting

In accordance with the requirements of Section 3.4 of the CL:AIRE DoWCoP, this section of the report will outline how the materials management planning has been carried out over the course of the project. The report will compare the works carried out with the original Materials Management Plan (MMP) and any changes to the works.

To date, no materials have been required to be imported to the site under the MMP, which has predominantly comprised the re-use of site won soils and importation of first generation quarried aggregates and manufactured topsoil. All other unsuitable soils and materials have been removed and disposed off-site to a suitable facility.

All site won materials were re-used in accordance with the BSL Remedial Strategy and Earthworks Specification, which included the stabilisation of soils for geotechnical purposes. The records for these works is to be reported under a separate Earthworks Validation Report.

A summary of the requirements of the MMP Verification and location of the information is presented in the table below:

| Item | Comments |
|---|---|
| Appropriate site plans | See drawings section of this report. |
| Experience and qualifications of the person preparing the report | Peter Holland BSc (Hons) FGS –Over four years of industry experience, has authored several MMPs. Has attended internal training on the DoWCoP and MMPs presented by Aaron Stokoe (CL:AIRE QP414) and Soil reuse in construction: A CL:AIRE DoW CoP MMP journey webinar.<br>Nicola Swallow BSc (Hons) MSc MIEnvSc – Over 13 year of industry experience including MMPs. |
| Description of how the use of materials links with the Remediation Strategy | In accordance with the approved Remedial Strategy, MMP and Earthworks Specification, enabling earthworks were carried out to create a level development platform for a large school with associated MUGA pitches, soft landscaping and access road. Where required, site won soils were treated via lime stabilisation to create a stiffened engineered platform and verified in accordance with the Earthworks Specification. Unsuitable soils and materials were removed off site. Topsoil/subsoil was retained onsite in order to form part of the clean cover system required as part of the Remedial Strategy. |
| Reference to site investigation data | Geotechnics, Desk Study Report, reference PC228400, dated May 2022.<br>Geotechnics, Preliminary Ground Investigation Report with Interpretive Chapter, reference PN224390, dated August 2022.<br>BSL Phase II Geo-Environmental Assessment Report, reference FS1013-BSL-XX-XX-T-O-1000 Rev P05, dated July 2024.<br>Summaries provided in Section 2.0 of this report. |
| Reference to risk assessments | As above. Summaries provided in Section 3.0 of this report. |
| Reference to the MMP and associated tracking system, including any deviations and why | BSL, Materials Management Plan, reference FS1013-BSL-XX-XX-T-O-1007 Rev P02, dated March 2026.<br>See volumes table and accompanying paragraphs below. |
| The suitable for use criteria adopted | See Appendix B. |
| Any treatment records | Earth-Tech Solutions Soil Stabilisation Design Report (ref. ETS/CL/P25071-01 Rev 01) dated January 2025.<br>Earthworks Validation Report, reference PH/C5394/14753 dated November 2025.<br>Earthworks Validation Report – Highways, reference AH/C5394/14880 dated May 2026. |

| Item | Comments |
|---|---|
| Reference to waste transfer documentation, including return loads | Waste transfer notes provided in Appendix C. |
| Signed delivery tickets | See Appendix X, where applicable. |
| Record of contingency arrangement(s) that had to be implemented (if any) | Additional topsoil retained onsite as per MMP Rev P02 above. Out of specification materials removed from site and disposed of. See Section 5.0 above. |
| Record of quantity of materials used | See table below. |
| Copies of signed Declaration(s) by Qualified Person(s) | See MMP in Appendix E. |

The volumes of materials re-use provided by the contractor to BSL is summarised in the table below:

| Materials Type | Description / Comments / Area of Use | Estimated Volume Re-Used/Imported ($m^3$) |
|---|---|---|
| Topsoil | Topsoil (site-won) to be used within the clean cover system. | 1830 |
| Class 6 | 6F2 (site won) Generated from previous onsite school structure. Used within the piling mat below building footprint. | 1250 |
| Subsoil | For use as general fill and within the clean cover system. | 770 |
| Class 2 | Site won natural material used as general fill utilised as part of the earthworks programme within the north section of the site. | 5315 |

# 6.0 CONCLUSIONS

## 6.1 General

The remedial works described within this report were carried out between the dates of 24th February 2025 and 28th May 2026 under the supervision of experienced BSL geo-environmental engineers.

## 6.2 Site Won and Imported Soils

Localised organic made ground identified around WS101 during the 2023 investigation was excavated and removed under BSL supervision in February 2025 due to elevated methane concentrations. Approximately 312m³ of organic material was removed and disposed of at Pilsworth Landfill, with the excavation subsequently backfilled using imported Class 6 material for the piling mat.

Approximately 4,000m³ of imported Class 6 material was used for the working platform, roads and hardstanding areas. Testing identified marginal PAH exceedances within imported recycled 6F2 material; however, BSL concluded the material was suitable for retention beneath hardstanding and buildings, supported by clean cover measures and agreement from Bury Council.

Approximately 1,250m³ of demolition-derived site won 6F2 material was reused within the piling mat. Testing identified elevated PAHs in some samples, but BSL concluded the material was suitable for reuse beneath buildings and hardstanding areas where exposure pathways would be broken, additionally, any use in soft landscaping areas would be mitigated by the clean cover system.

Site won topsoil was assessed for reuse within the clean cover system to reduce offsite disposal and import requirements. Of the 4,237m³ stripped, 1,830m³ was retained onsite. As part of the testing of this material, one sample was recorded containing trace amounts of asbestos, this sample location was delineated and removed, with confirmatory testing confirming removal of impacted material.

Another 760m³ of topsoil was tested for potential re-use (TS2 & TS3) however anthropogenic content and elevated levels of PAHs meant these were unsuitable for use in the clean cover system, and therefore were instead used as general fill below the clean cover system.

A number of site won subsoil stockpiles were generated during the earthworks process and assessed for reuse onsite, with a combined total volume of approximately 1,370m³, in addition to 400m³ of natural subsoil retained in-situ.

SS1 comprised approximately 620m³ of slightly gravelly sandy clay generated from cut works in the north-west of the site. Testing identified trace asbestos in two samples and, as such, the material was deemed unsuitable for use within the clean cover system. The material was instead approved for reuse beneath hardstanding or below the proposed cover system within the MUGA/sports pitch earthworks area.

CS3 comprised approximately 250m³ of natural orangish brown subsoil generated during the access road and roundabout earthworks. Testing confirmed no contaminant exceedances and the material was considered suitable for reuse within the engineered batter alongside the access road.

CS5 comprised approximately 500m³ of natural cohesive subsoil stockpiled to the west of the proposed building footprint. Chemical testing confirmed the material was suitable for reuse as subsoil within the clean cover system. Current the stockpile remains onsite awaiting placement.

In addition, approximately 400m³ of natural subsoil was retained in-situ within the north-west section of the site and validated through chemical testing as suitable for incorporation within the clean cover system.

Hydrocarbon-impacted made ground was identified within the TP307 area during post-demolition investigations, with elevated PAHs and hazardous waste classification associated with TPHs. Further delineation works confirmed the impacted area to be localised, however subsequent watching briefs during access road and service excavations identified additional made ground arisings requiring assessment.

Additional chemical testing identified elevated benzo(a)pyrene concentrations, however no significant volatile contamination or hydrocarbon odours were recorded onsite. A detailed geo-environmental assessment concluded the material was suitable for retention beneath hardstanding areas under the proposed commercial/school end use scenario, which was accepted by Bury Council in July 2025. Approximately 250m³ of material remains stockpiled onsite pending reuse.

Approximately 1,300m³ of imported recycled topsoil has been brought to site for use within the clean cover system to date. Source and onsite validation testing confirmed the imported material was suitable for residential use without plant uptake, with additional imports for later phases to be validated as part of the Phase II area validation.

### 6.3 Verification of Clean Cover System

Based on the chemical testing completed, BSL can confirm that the imported soils within the soft landscaping areas have been installed to the correct depth and are in line with the chemical testing criteria as per the Remedial Strategy.

### 6.4 Installation of Geogrid

As part of the initial site investigation undertaken by BSL and Geotechnics, a potential risk was identified due to the site being within a high risk development area in respect to historical coal mining as highlighted in the BSL Coal Mining Risk Assessment.

Although the risk was considered to be low below the proposed building, limited site investigation was undertaken within the high risk development area across the wider site, therefore in order to mitigate the risk of potential subsidence within the roads and hardstanding areas, it was proposed that a geogrid membrane would be placed below hardstanding areas.

Photographic evidence has been provided by the groundworks contractor showing the installation of the geogrid.

As of May 2026, the installation of the geogrid is ongoing, this report only covers the geogrid installation within the Phase 1 handover area.

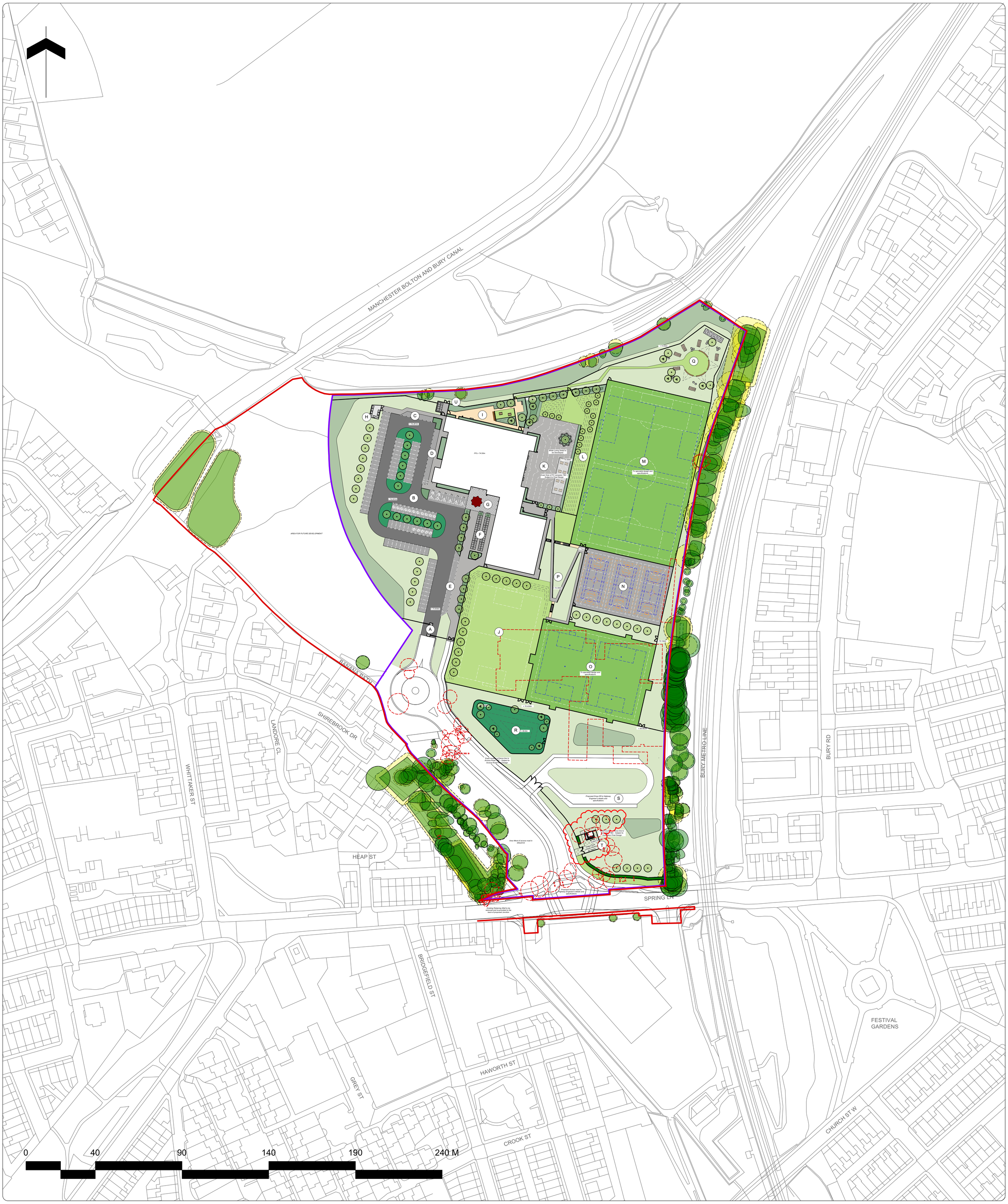
### 6.5 Watching Brief

A watching brief was maintained by the Principal Contractor throughout the remediation and redevelopment of the site. To the best of BSL's knowledge, gross contamination was not identified, and the ground conditions were understood to be broadly consistent with those encountered during the earlier ground investigations. Therefore, no additional remedial measures were considered necessary at the site over and above those already stipulated within the approved Remedial Strategy

## 6.6 Long Term Monitoring and Other Requirements

Site verification is ongoing with the Phase I and Phase II areas. Outstanding verification within the Phase I area includes depth validation of the clean cover system. Phase II verification will be completed once partial planning has been signed off for Phase I.

# DRAWINGS




## Note

1. Do not scale from this drawing
2. To be read in conjunction with Project Risk Register REF: FS1013-ALA-EX-XX-RR-L-00001
3. To be read in conjunction with all other Landscape Architect's drawings
4. To be read in conjunction with Outline Landscape Specification REF: FS1013-ALA-EX-XX-SP-L-0001

## RESIDUAL PROJECT RISKS

| ID | RISK | MITIGATION | DATE MITIGATED |
|---|---|---|---|
| 1 | Drowning in dry retention basin | 2.4m fencing. End user access restricted. Basin to be 600mm deep. Basin is dry except during a stormwater event. Warning sign. | 31.07.23 |
| 2 | Falling on stairs while accessing sport pitches | Stairway is 2m wide. Hand rails provided at standard widths. | 31.07.23 |
| 3 | Collision between pedestrians and vehicles accessing accessible parking bays | School to manage vehicle speed. Bollards added to bays. | 31.07.23 |
| 4 | Collision between pedestrians and vehicles in car park. | Landscape features to stop vehicles from leaving the roads and parking areas. Road markings to clearly denote parking. | 31.07.23 |
| 5 | Collision between pedestrians and cyclist accessing cycle storage facilities | 5m wide pedestrian / cycle approach. School to manage speed on site. Clear way/finding. | 31.07.23 |
| 6 | Coming into contact with underground utilities and services. | Tree pits to be located outside easement areas. Woodland planting also outside of easement areas/grass/meadow seed only. | 31.07.23 |
| 7 | Falling from height - 1:3 grassed bank to east of sports hall | Grassed banks designed to be to a gradient of max 1:3. 1.1m post and rail timber fencing introduced. | 31.07.23 |
| 8 | Collision between pedestrians and open windows | Green buffers to window openings | 31.07.23 |

## KEY

**Site**

- Planning Application Boundary
- Extent of Works
- Proposed Building
- Existing Building to be demolished
- Existing Tree Retained
- Root Protection Area (RPA)
- Existing Tree to be removed
- Propsed Contours

A **Entrance & Exit Gates**
Automated Sliding gates

B **Car Park**
97no, Incl. 6no. Accessible & 18 no. EVCP
2no. Motorcycle bays (Location of EV Parking and Motorcycle bays TBC)

C **Refuse Layby**

D **Delivery/SEN Drop off Layby**

E **Coach drop off/Pick up**
2no. Coach Spaces

F **Cycle Parking (Student)**
40no. Cycle hoops, 80no. Cycle spaces

G **Entrance Plaza**
Featured Block Paving

H **Bin Store**

I **SEN Garden**
Outdoor garden for SEN Students

J **Mini Soccer Pitch**
Grass area for outdoor play.
Potential to accommodate an U9/U10 mini soccer pitch (61.0 x 43.0m). To be marked out as required subject to demand

K **Hard Informal**
Secure Playground, with seating and canopies and feature line markings

L **Propsed Grass Terraces**
Contours to take the level difference, can also be used as natural bleacher style seating

M **3G All Weather Pitch**
Primary sport- Football, can also accomodate Rugby training
2Ng. 7-a-Side Football pitches TBC

N **MUGA**
Accomadates Basketball, Netball & Tennis

O **GEN 2 All Weather Pitch**
Accomadates Hockey and Football

P **DDA Compliant route to Pitches & Stair access**

Q **Habitat/ Outdoor Learning area**
Mown grass path and area with seating and educational habitat features

R **SUDS**
Dry attenutation basin

S **Drop off loop**
Capacity for 14no. cars

T **Potential Substation, Water Meter and Gas Meter Location**
To be Coordinated with M&E Engineer

U **Cycle Parking (Staff)**
5no. Cycle hoops, 10no. Cycle spaces

DfE DESIGN DELIVERABLE REF :
**150**

## REVISIONS

| DATE | REV | DESCRIPTION OF REVISION | DRAWN BY | APPROVED BY |
|---|---|---|---|---|
| 29/04/2024 | P14 | 1. Substation location updated. Associated fencing amended to suit. 3no. trees moved north. | BS | - |
| 11/04/2024 | P13 | 1. SEN garden amended following updated SEN internal layout<br>2. Changes to fence line around SEN area, post and rain fencing south of sports hall, binstore area, access road, substation.<br>3. Levels to sport pitches amended as per SEL recommendations.<br>4. Lates access road design incorporated within site plan.<br>5. Feature star to main entrance amended to move away from building.<br>6. Substation and LV room amended as per latest KR design. | BS | - |
| 15/01/2024 | P12 | Wall reprovided on spring lane revised to sit within the planning boundary<br>Issued for Planning | BS | |
| 08/01/2024 | P11 | Existing wall along Spring Ln to be removed and re-provided.<br>7no. Trees relocated near Spring Ln.<br>Not issued for planning as further review is required | BS | - |

STATUS :
**S4 - *Contractor's Proposals***


Ares Landscape Architects LTD
Gatecrasher,
51 Eyre Lane
Sheffield
S1 4RB
t: 0114 276 2000
e: hello@aresdesign.co.uk
w: ares.eu.com

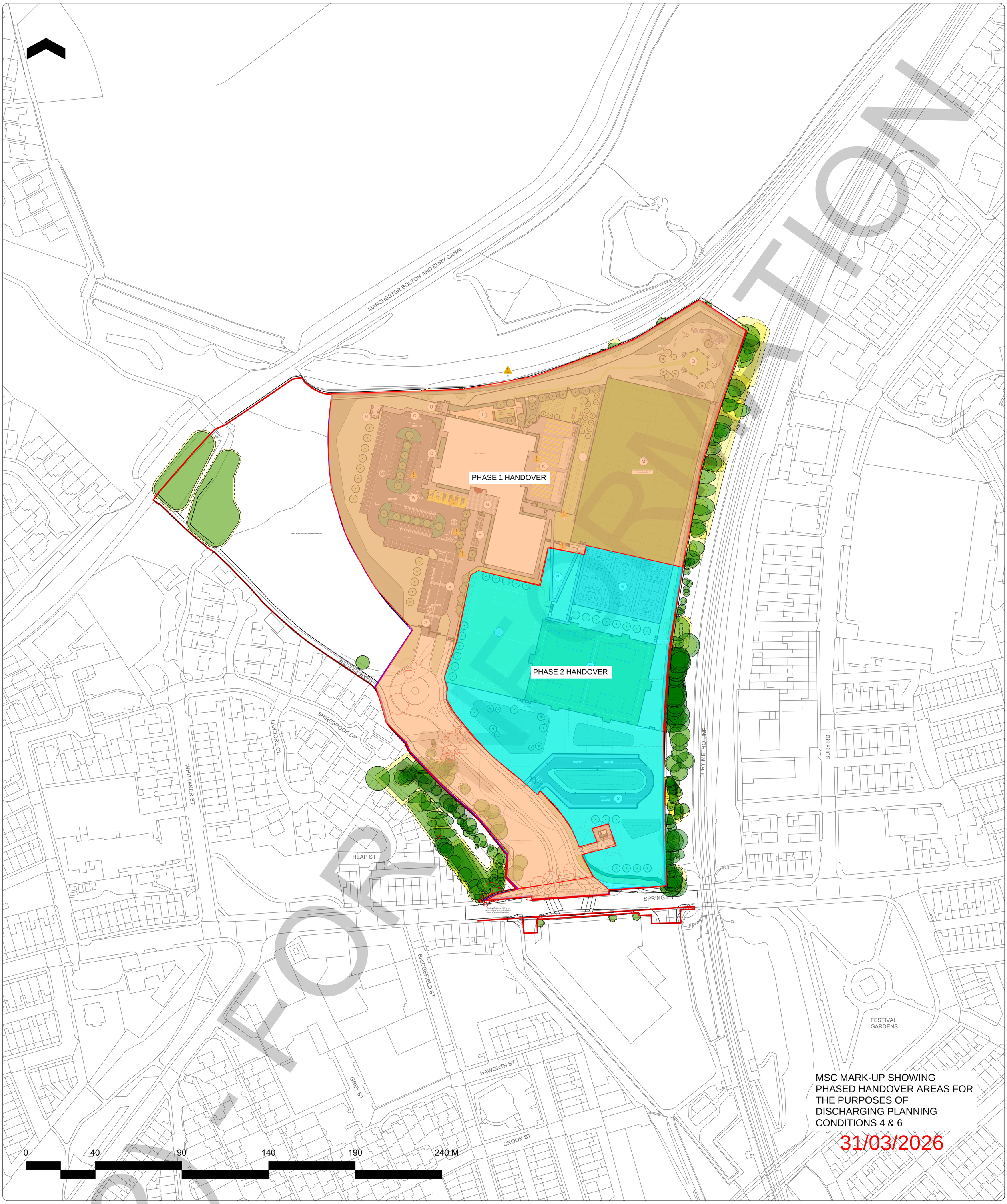

CLIENT :
**Morgan Sindall**

PROJECT TITLE :
**Star Radcliffe Academy, Bury**

DRAWING TITLE :
**Whole Site Plan**

| DRAWING SCALE : | DRAWN BY : | DRAWN DATE : |
|---|---|---|
| 1:1000 | PH | 06/07/2023 |
| PAPER SIZE : | APPROVED BY : | ALA PROJECT CODE: |
| A1 | BS | ALA805 |

DRAWING NUMBER : **FS1013-ALA-EX-ZZ-D-L-0001** STATUS : **S4** REVISION : **P14**




FOR S2

MSC MARK-UP SHOWING PHASED HANDOVER AREAS FOR THE PURPOSES OF DISCHARGING PLANNING CONDITIONS 4 & 6

31/03/2026

## Note

1. Do not scale from this drawing
2. To be read in conjunction with Project Risk Register REF: FS1013-ALA-EX-XX-RR-L-00001
3. To be read in conjunction with all other Landscape Architect's drawings
4. To be read in conjunction with Outline Landscape Specification REF: FS1013-ALA-EX-XX-SP-L-0001

## KEY

**Site**

- Planning Application Boundary
- Extent of Works
- Proposed Building
- Existing Building to be demolished
- Existing Tree Retained
- Root Protection Area (RPA)
- Existing Tree to be removed
- Proposed Contours

(A) **Entrance & Exit Gates**
Automated Sliding gates

(B) **Car Park**
97no, Incl. 6no. Accessible & 18 no. EVCP
2no. Motorcycle bays

(C) **Refuse Layby**

(D) **Delivery/SEN Drop off Layby**

(E) **Coach drop off/Pick up**
2no. Coach Spaces

(F) **Cycle Parking (Student)**
40no. Cycle hoops, 80no. Cycle spaces

(G) **Entrance Plaza**
Featured Block Paving

(H) **Bin Store**

(I) **SEN Garden**
Outdoor garden for SEN Students

(J) **Mini Soccer Pitch**
Grass area for outdoor play.
Potential to accommodate an U9/U10 mini soccer pitch (61.0 x 43.0m). To be marked out as required subject to demand.

(K) **Hard Informal**
Secure Playground, with seating and canopies and feature line markings

(L) **Proposed Grass Terraces**
Contours to take the level difference, can also be used as natural bleacher style seating

(M) **3G All Weather Pitch**
Primary sport- Football, can also accomodate Rugby training
4No. 7-a-Side Football pitches TBC

(N) **MUGA**
Accomadates Basketball, Netball & Tennis

(O) **GEN 2 All Weather Pitch**
Accomadates Hockey and Football

(P) **DDA Compliant route to Pitches & Stair access**

(Q) **Habitat/ Outdoor Learning area**
Mown grass path and area with seating and educational habitat features

(R) **SUDS** OMITTED
Dry attenuation basin

(S) **Drop off loop**
Capacity for 14no. cars

(T) **Potential Substation, Water Meter and Gas Meter Location**
To be Coordinated with M&E Engineer

(U) **Cycle Parking (Staff)**
5no. Cycle hoops, 10no. Cycle spaces

## RESIDUAL PROJECT RISKS

| ID | RISK | MITIGATION | DATE MITIGATED |
|---|---|---|---|
| 1 | Himalayan Balsam | Removal actions included in management plan. | 30.10.25 |
| 2 | Falling on stairs while accessing sport pitches | Stairway is 2m wide. Hand rails provided at standard widths. | 31.07.23 |
| 3 | Collision between pedestrians and vehicles accessing accessible parking bays | School to manage vehicle speed. Bollards added to bays. | 31.07.23 |
| 4 | Collision between pedestrians and vehicles in car park. | Landscape features to stop vehicles from leaving the roads and parking areas. Road markings to clearly demote parking. | 31.07.23 |
| 5 | Collision between pedestrians and cyclist accessing cycle storage facilities | 5m wide pedestrian / cycle approach. School to manage speed on site. Clear wayfinding. | 31.07.23 |
| 6 | Coming into contact with underground utilities and services. | Tree pits to be located outside easement areas. Woodland planting also outside of easement areasgrass/meadow seed only. | 31.07.23 |
| 7 | Falling from height - 1:3 grassed bank to east of sports hall | Grassed banks designed to be to a gradient of max 1:3. 1.1m post and rail timber fencing introduced. | 31.07.23 |
| 8 | Collision between pedestrians and open windows | Green buffers to window openings | 31.07.23 |

DfE DESIGN DELIVERABLE REF :

**150**

## REVISIONS

| DATE | REV | DESCRIPTION OF REVISION | DRAWN BY | APPROVED BY |
|---|---|---|---|---|
| 11/03/2026 | P20 | Reissued for Planning | SE | BS |
| 19/02/2026 | C07 | Issued for Contruction | SE | RS |
| 17/02/2026 | P19 | Layout updated following design team review:<br>1. PV Canopies modified.<br>2. Tree positions adjusted to not clash with water drainage.<br>3. Trees adjacent to PV canopies moved to avoid shading.<br>4. Levels to pitches, soft landscape around drop-off loops and the loop itself raised. | SE | RS |
| 19/12/2025 | C06 | Updated with planted area to bottom of grassed terraces. | BS | - |

STATUS :

**S2 - *For Planning***

ares LANDSCAPE ARCHITECTS
Ares Landscape Architects LTD
Gatecrasher,
51 Eyre Lane
Sheffield
S1 4RB
t: 0114 276 2000
e: hello@aresdesign.co.uk
w: ares.eu.com

CLIENT :

**Morgan Sindall**

PROJECT TITLE :

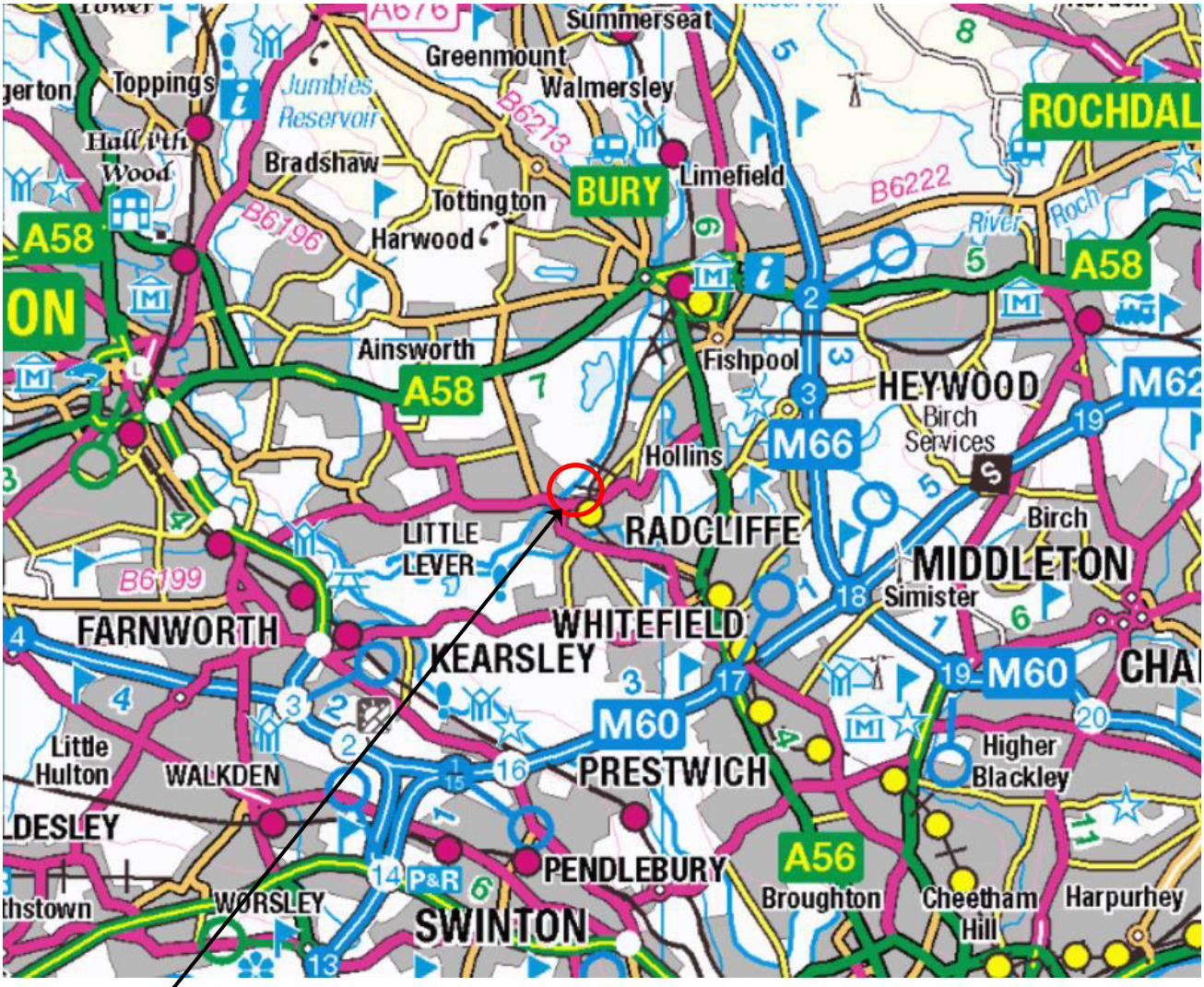
**Star Radcliffe Academy, Bury**

DRAWING TITLE :

**Whole Site Plan**

| DRAWING SCALE : | DRAWN BY : | DRAWN DATE : |
|---|---|---|
| 1:1000 | PH | 22/10/2025 |
| PAPER SIZE : | APPROVED BY : | ALA PROJECT CODE: |
| A1 | BS | ALA805 |

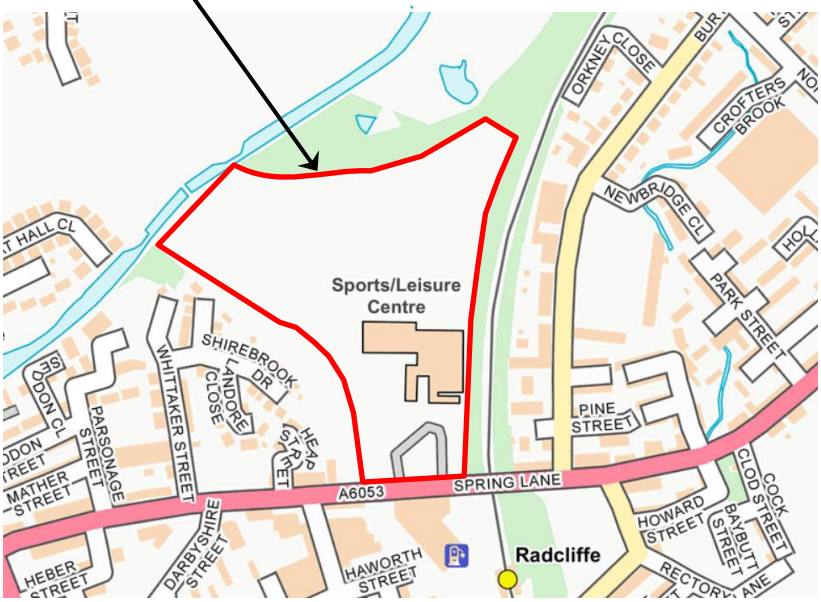
DRAWING NUMBER : **FS1013-ALA-EX-ZZ-D-L-0001** STATUS : **S2** REVISION : **P20**




SITE LOCATION

NEAREST POSTCODE: M26 2SZ

SITE ENTRANCE WHAT3WORDS: ///CHAIR.VERGE.SINGLE




| REV | DATE | DESCRIPTION | BY | CKD |
|---|---|---|---|---|
| | | | | |

BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

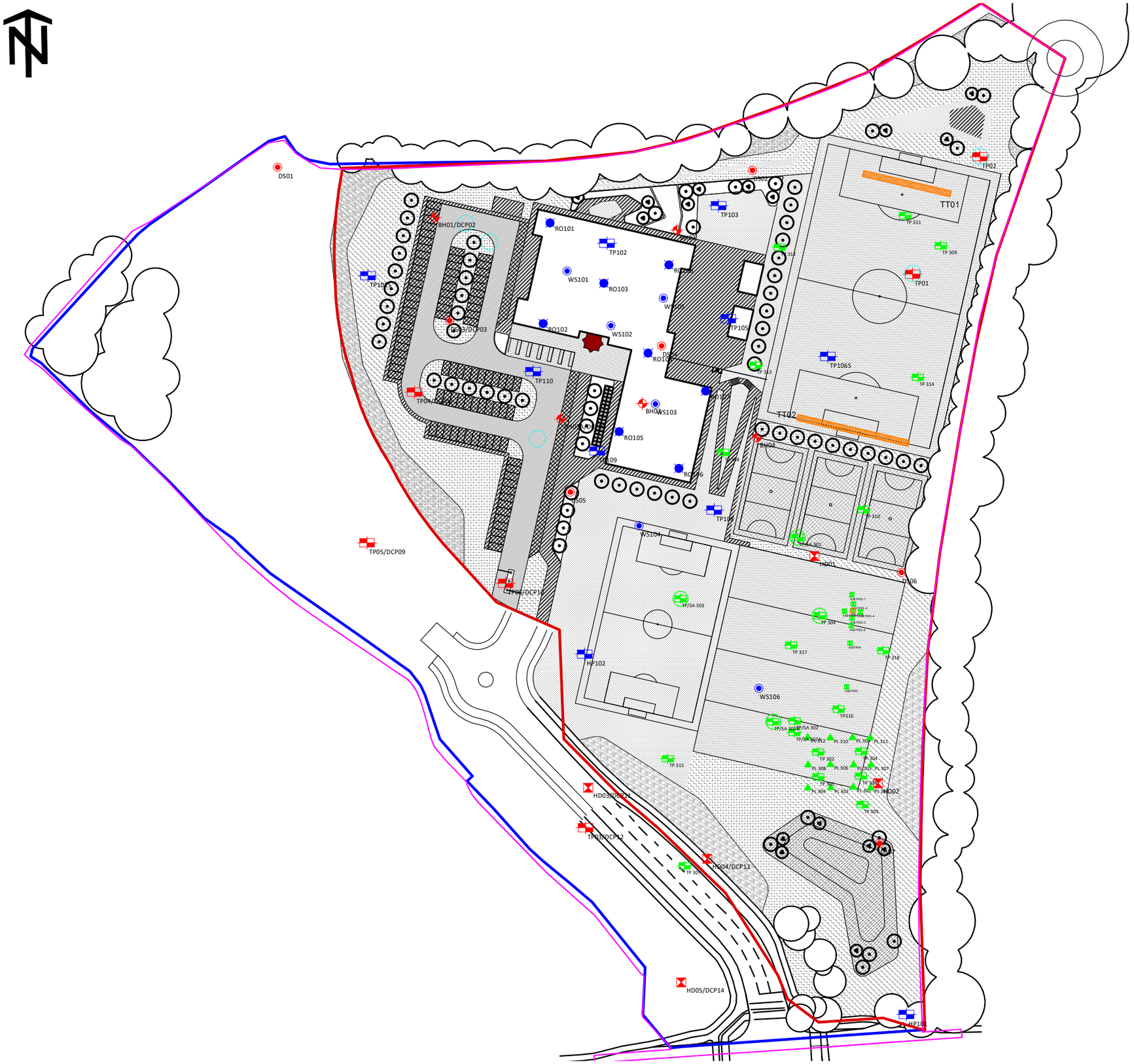
CLIENT
MORGAN SINDALL

PROJECT TITLE
STAR ACADEMY, RADCLIFFE, MANCHESTER

DRAWING TITLE
SITE LOCATION PLAN

| DRAWING No. | REVISION | SCALE | DATE |
|---|---|---|---|
| C5394/01 | - | NTS | 16/06/23 |

| DRAWN BY | CHECKED BY |
|---|---|
| SD | PH |




| KEY | |
|---|---|
| | APPROXIMATE SITE BOUNDARY |
| TPXX | TRIAL PIT |
| WSXX | WINDOW SAMPLE BOREHOLE |
| ROXX | ROTARY OPEN BOREHOLE |
| | BOREHOLE INSTALLATION |
| TPXXX | ADDITIONAL TRIAL PIT |
| TTXX | ADDITIONAL TRIAL TRENCH |
| | ADDITIONAL SLIT TRENCH |
| | SOAKAWAY INFILTRATION TEST |
| GEOTECHNICS (2022) | |
| HPXX | HAND EXCAVATED TRIAL PIT |
| TPXX | TRIAL PIT |
| DSXX | WINDOW SAMPLE BOREHOLE |
| BHXX | CABLE PERCUSSIVE/ROTARY CORE BOREHOLE |
| DCPXX | PLATE LOAD TEST.LWD.TRL-DCP |
| | SOAKAWAY INFILTRATION TEST |
| | BOREHOLE INSTALLATION |
| POST-DEMOLITION SI (2024) | |
| TPXX | TRIAL PIT |
| PLXX | PLATE LOAD TEST |
| | SOAKAWAY INFILTRATION TEST |
| ASBTPXX | ASBESTOS TRIAL PIT |
| ASXX | ASBESTOS IDENTIFICATION |

NOTES

1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS REPORTS. THIS DRAWING IS COPYRIGHT OF BSL.
3. DRAWING NOT FOR CONSTRUCTION PURPOSES.

| REV | DATE | DESCRIPTION | BY | CKD |
|---|---|---|---|---|
| | | | | |
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BROWNFIELD SOLUTIONS LTD

CLIENT

MORGAN SINDALL

PROJECT TITLE

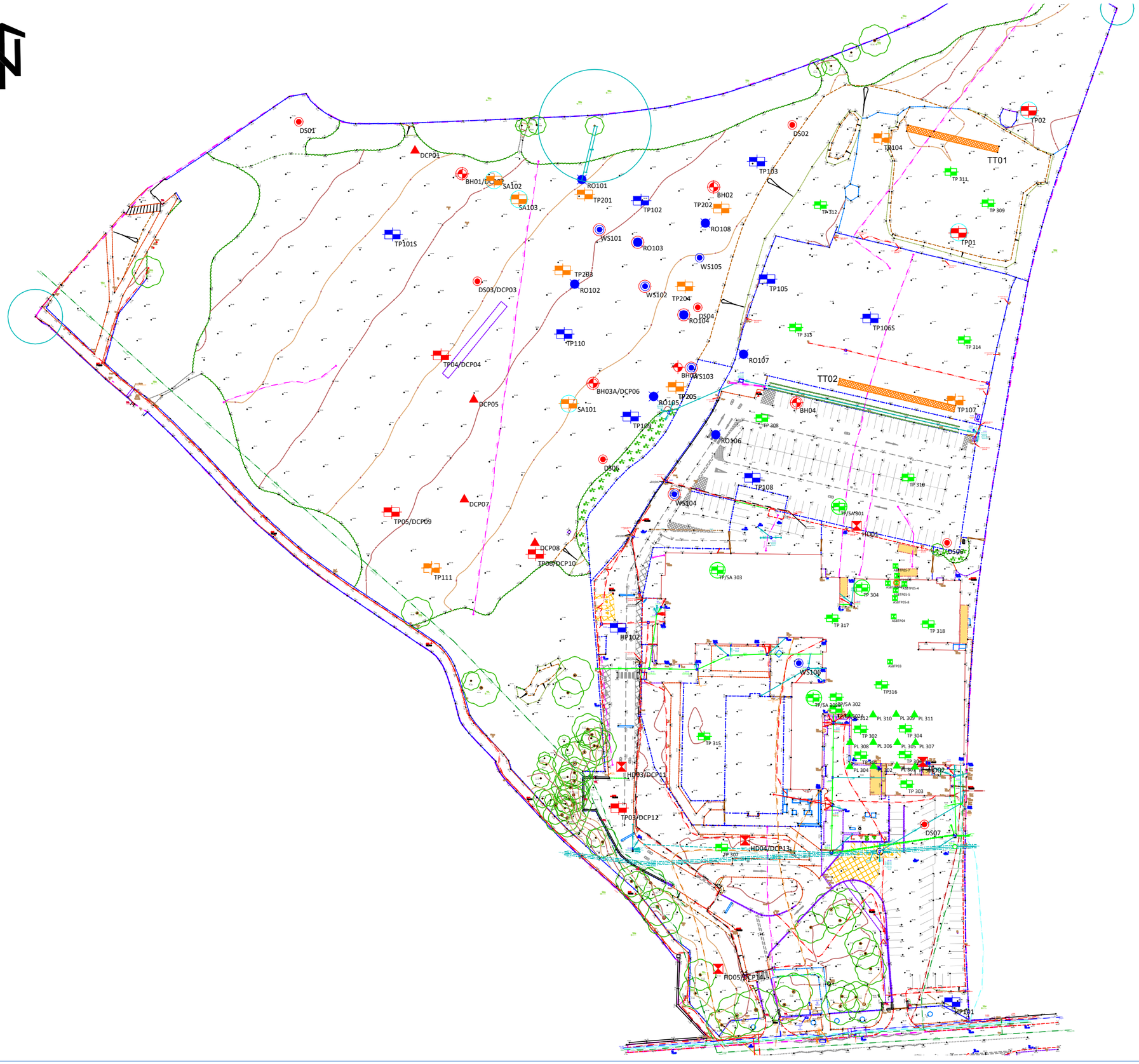
STAR ACADEMY, RADCLIFFE

DRAWING TITLE

# EXPLORATORY HOLE LOCATION PLAN

| DRAWING No. | REVISION | SCALE | DATE |
|---|---|---|---|
| C5394/02 | D | NTS | 08/07/24 |

| DRAWN BY | CHECKED BY |
|---|---|
| MB | PH |




| KEY | |
|---|---|
| | APPROXIMATE SITE BOUNDARY |
| TPXX | TRIAL PIT |
| WSXX | WINDOW SAMPLE BOREHOLE |
| ROXX | ROTARY OPEN BOREHOLE |
| | BOREHOLE INSTALLATION |
| TPXXX | ADDITIONAL TRIAL PIT |
| TTXX | ADDITIONAL TRIAL TRENCH |
| | ADDITIONAL SLIT TRENCH |
| | SOAKAWAY INFILTRATION TEST |
| GEOTECHNICS (2022) | |
| HPXX | HAND EXCAVATED TRIAL PIT |
| TPXX | TRIAL PIT |
| DSXX | WINDOW SAMPLE BOREHOLE |
| BHXX | CABLE PERCUSSIVE/ROTARY CORE BOREHOLE |
| DCPXX | PLATE LOAD TEST.LWD.TRL-DCP |
| | SOAKAWAY INFILTRATION TEST |
| | BOREHOLE INSTALLATION |
| POST-DEMOLITION SI (2024) | |
| TPXX | TRIAL PIT |
| PLXX | PLATE LOAD TEST |
| | SOAKAWAY INFILTRATION TEST |
| ASBTPXX | ASBESTOS TRIAL PIT |
| ASB | ASBESTOS IDENTIFICATION |

NOTES

1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
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| REV | DATE | DESCRIPTION | BY | CKD |
|---|---|---|---|---|
| D | 08/07/24 | UPDATED FOLLOWING MAY 2024 POST-DEMOLITION SITE INVESTIGATION | JEM | TM |

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CLIENT

MORGAN SINDALL

PROJECT TITLE

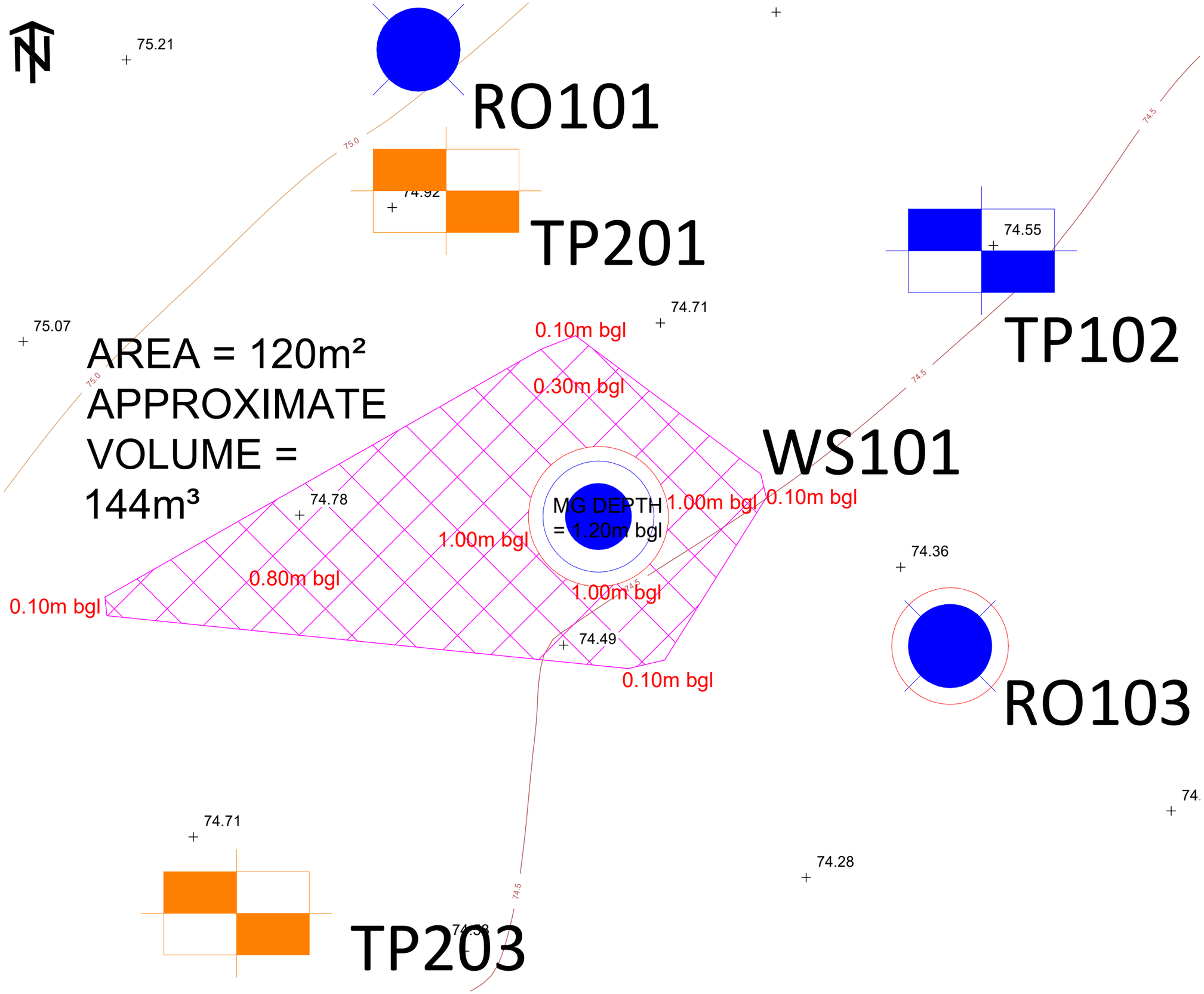
STAR ACADEMY, RADCLIFFE

DRAWING TITLE

EXPLORATORY HOLE LOCATION PLAN

| DRAWING No. | REVISION | SCALE | DATE |
|---|---|---|---|
| C5394/02A | D | NTS | 08/07/24 |

| DRAWN BY | CHECKED BY |
|---|---|
| JEM | TM |




| KEY | |
|---|---|
| | APPROXIMATE SITE BOUNDARY |
| TPXX | TRIAL PIT |
| WSXX | WINDOW SAMPLE BOREHOLE |
| ROXX | ROTARY OPEN BOREHOLE |
| | BOREHOLE INSTALLATION |
| TPXXX | ADDITIONAL TRIAL PIT |
| TTXX | ADDITIONAL TRIAL TRENCH |
| | ADDITIONAL SLIT TRENCH |
| | APPROXIMATE AREA OF ORGANIC MATTER |
| 1.00m bgl | DEPTH OF ORGANIC MATTER |

| GEOTECHNICS (2022) | |
|---|---|
| HPXX | HAND EXCAVATED TRIAL PIT |
| TPXX | TRIAL PIT |
| DSXX | WINDOW SAMPLE BOREHOLE |
| BHXX | CABLE PERCUSSIVE/ROTARY CORE BOREHOLE |
| DCPXX | PLATE LOAD TEST.LWD.TRL-DCP |
| | SOAKAWAY INFILTRATION TEST |
| | BOREHOLE INSTALLATION |

NOTES

1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
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MORGAN SINDALL

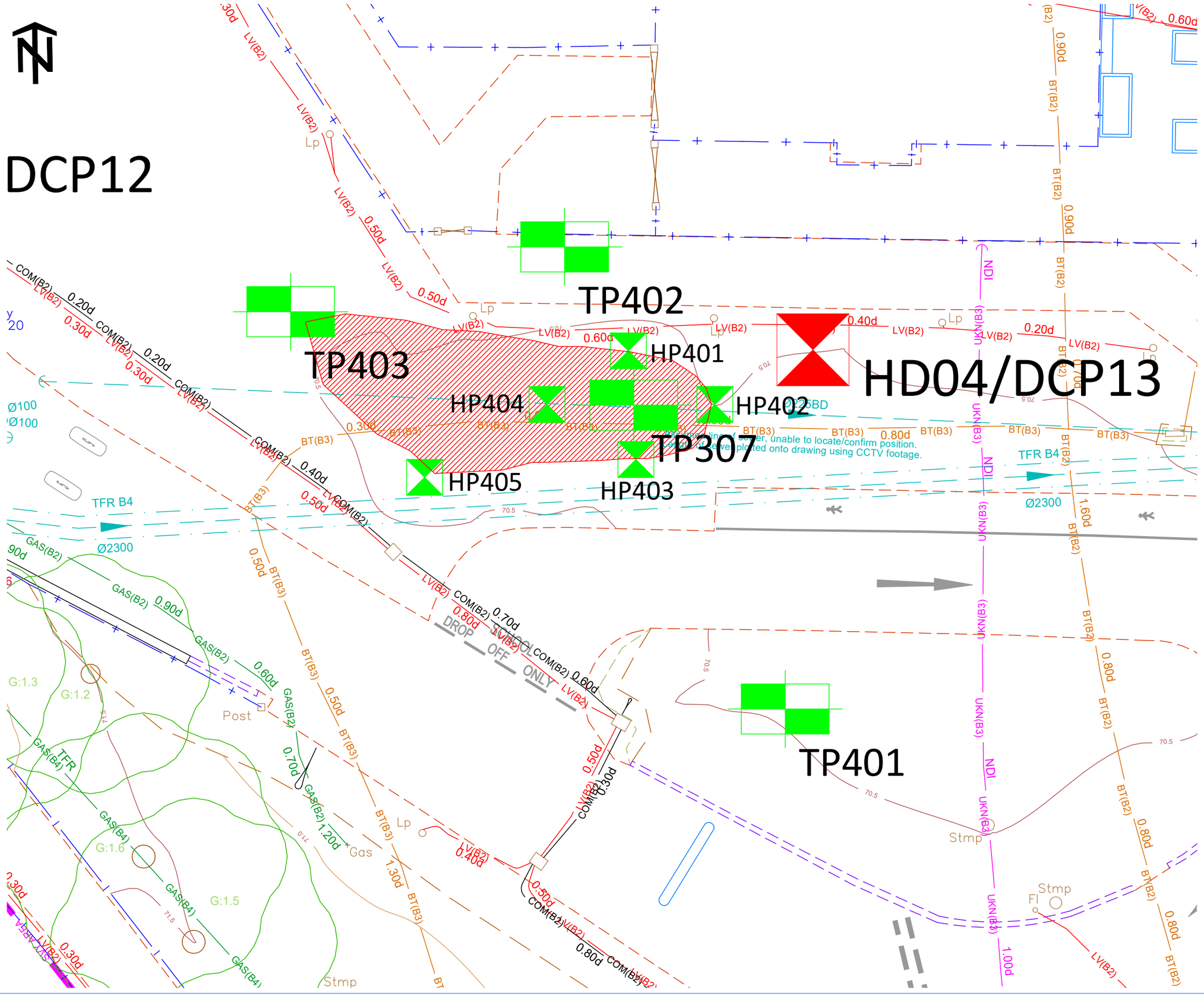
PROJECT TITLE
STAR ACADEMY, RADCLIFFE

DRAWING TITLE
WS101 ORGANIC MATTER PLAN

| DRAWING No. | REVISION | SCALE | DATE |
|---|---|---|---|
| C5394/07 | - | NTS | 23/11/23 |

| DRAWN BY | CHECKED BY |
|---|---|
| PH | NS |

# DCP12




KEY

| GEOTECHNICS (2022) | |
|---|---|
| HPXX | HAND EXCAVATED TRIAL PIT |
| TPXX | TRIAL PIT |
| DSXX | WINDOW SAMPLE BOREHOLE |
| BHXX | CABLE PERCUSSIVE/ROTARY CORE BOREHOLE |
| DCPXX | PLATE LOAD TEST.LWD.TRL-DCP |
| | SOAKAWAY INFILTRATION TEST |
| | BOREHOLE INSTALLATION |
| **POST-DEMOLITION SI (2024)** | |
| TPXX | TRIAL PIT |
| PLXX | PLATE LOAD TEST |
| | SOAKAWAY INFILTRATION TEST |
| ASBTPXX | ASBESTOS TRIAL PIT |
| ASB | ASBESTOS IDENTIFICATION |
| HPXX | HAND EXCAVATED TRIAL PIT |
| | EXTENT OF MADE GROUND SOILS CLASSIFIED AS HAZARDOUS |

NOTES

1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
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|---|---|---|---|---|
| A | 09/09/24 | FOLLOWING ADDITIONAL DELINEATION TESTING, UPDATE TO HOTSPOT EXTENT | JEM | TM |

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MORGAN SINDALL

PROJECT TITLE
STAR ACADEMY, RADCLIFFE

DRAWING TITLE
TP307 HAZARDOUS SOILS EXTENTS PLAN

| DRAWING No. | REVISION | SCALE | DATE |
|---|---|---|---|
| C5394/12 | A | NTS | 09/09/24 |

| DRAWN BY | CHECKED BY |
|---|---|
| JEM | JM |




KEY

AREAS OF GEOGRID PROTECTION

OUTLINE OF HIGH RISK DEVELOPMENT AREA

NOTES

1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
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| REV | DATE | DESCRIPTION | BY | CKD |
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CLIENT

MORGAN SINDALL

PROJECT TITLE

STAR ACADEMY, RADCLIFFE

DRAWING TITLE

GEOGRID LOCATION PLAN

| DRAWING No. | REVISION | SCALE | DATE |
|---|---|---|---|
| C5395/14 | B | NTS | 29/05/2025 |

| DRAWN BY | CHECKED BY |
|---|---|
| KB | SM |




KEY:

- 450MM CLEAN COVER SYSTEM WITH GEOTEXTILE WARNING MEMBRANE AREAS
- OUTLINE OF GEOTEXTILE WARNING MEMBRANE AREA
- 450MM CLEAN COVER SYSTEM WITHOUT GEOTEXTILE WARNING MEMBRANE
- LIMITED ACCESS AREA - NO CLEAN COVER SYSTEM OR GEOTEXTILE WARNING MEMBRANE REQUIRED

NOTES

1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS REPORTS. THIS DRAWING IS COPYRIGHT OF BSL.
3. DRAWING NOT FOR CONSTRUCTION PURPOSES.

| REV | DATE | DESCRIPTION | BY | CKD |
|---|---|---|---|---|
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BROWNFIELD SOLUTIONS LTD

CLIENT

MORGAN SINDALL

PROJECT TITLE

STAR ACADEMY, RADCLIFFE

DRAWING TITLE

CLEAN COVER SYSTEM AND GEOTEXTILE LOCATION PLAN

| DRAWING No. | REVISION | SCALE | DATE |
|---|---|---|---|
| C5395/15 | B | NTS | 10/04/2026 |

| DRAWN BY | CHECKED BY |
|---|---|
| PH | TM |




## KEY

- APPROXIMATE SITE BOUNDARY
- AREA COVER SYSTEM IS NOT UNDERLAIN BY MEMBRANE
- TRIAL PITS
- INACCESSIBLE - FLOODED
- MADE GROUND ENCOUNTERED BENEATH COVER SYSTEM
- NATURAL GROUND ENCOUNTERED

NOTES

1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
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| REV | DATE | DESCRIPTION | BY | CKD |
|---|---|---|---|---|
| | | | | |
| | | | | |

BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

CLIENT
MORGAN SINDALL

PROJECT TITLE
STAR ACADAMEY

DRAWING TITLE
VALIDATION LOCATION PLAN – 13.11.26

| DRAWING No. | REVISION | SCALE | DATE |
|---|---|---|---|
| C5394_17 | - | NTS | 17/11/2025 |

| DRAWN BY | CHECKED BY |
|---|---|
| AF | SM |




## KEY

APPROXIMATE SITE BOUNDARY

AREA COVER SYSTEM IS NOT UNDERLAIN BY MEMBRANE

TRIAL PITS

INACCESSIBLE - FLOODED

NOTES

1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
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3. DRAWING NOT FOR CONSTRUCTION PURPOSES.

| REV | DATE | DESCRIPTION | BY | CKD |
|---|---|---|---|---|
| | | | | |
| | | | | |

BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

CLIENT
MORGAN SINDALL

PROJECT TITLE
STAR ACADAMEY

DRAWING TITLE
EXPLORATORY HOLE LOCATION PLAN 13.11.26

| DRAWING No. | REVISION | SCALE | DATE |
|---|---|---|---|
| C5394_17 | - | NTS | 17/11/2025 |

| DRAWN BY | CHECKED BY |
|---|---|
| AF | SM |




KEY:

- 450MM CLEAN COVER SYSTEM WITH GEOTEXTILE WARNING MEMBRANE AREAS
- OUTLINE OF GEOTEXTILE WARNING MEMBRANE AREA
- 450MM CLEAN COVER SYSTEM WITHOUT GEOTEXTILE WARNING MEMBRANE
- LIMITED ACCESS AREA - NO CLEAN COVER SYSTEM OR GEOTEXTILE WARNING MEMBRANE REQUIRED
- HPXX CLEAN COVER SYSTEM VALIDATION PIT

NOTES

1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
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3. DRAWING NOT FOR CONSTRUCTION PURPOSES.

| REV | DATE | DESCRIPTION | BY | CKD |
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BROWNFIELD SOLUTIONS LTD

CLIENT

MORGAN SINDALL

PROJECT TITLE

STAR ACADEMY, RADCLIFFE

DRAWING TITLE

CLEAN COVER SYSTEM VALIDATION PLAN

| DRAWING No. | REVISION | SCALE | DATE |
|---|---|---|---|
| C5395/19 | B | NTS | 08/05/2026 |

| DRAWN BY | CHECKED BY |
|---|---|
| SM | PH |

# APPENDIX A

**Chemical Specification for Soils**

BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

| Human Health Remediation Targets - Soils | | | Import in Garden Areas >600mm (below cover system); Based on human health without homegrown produce (1% SOM) | Re-use on site of origin only. Re-use only permitted beneath hardstanding; buildings, roads, car parks, pavements etc. Re-use Criteria based on Human health - Commercial (1%SOM) |
|---|---|---|---|---|
| Source | Contaminant | Unit | | |
| LQM S4UL | Arsenic | mg/kg | 40 | 640 |
| LQM S4UL | Cadmium | mg/kg | 85 | 190 |
| LQM S4UL | Chromium (III) | mg/kg | 910 | 8600 |
| LQM S4UL | Chromium (VI) | mg/kg | 6 | 33 |
| LQM S4UL | Copper | mg/kg | 7100 | 68000 |
| C4SL | Lead | mg/kg | 330 | 2300 |
| LQM S4UL | Mercury, Elemental | mg/kg | 1.2 | 58 |
| LQM S4UL | Nickel | mg/kg | 180 | 980 |
| LQM S4UL | Selenium | mg/kg | 430 | 12000 |
| LQM S4UL | Zinc | mg/kg | 40000 | 730000 |
| Atkins ATRISK | Cyanide (free) | mg/kg | 34 | 373 |
| LQM S4UL | Phenol (total) | mg/kg | 440 | 440 |
| LQM S4UL | Acenaphthene | mg/kg | 3000 | 84000 |
| LQM S4UL | Acenaphthylene | mg/kg | 2900 | 83000 |
| LQM S4UL | Anthracene | mg/kg | 31000 | 520000 |
| LQM S4UL | Benz(a)anthracene | mg/kg | 11 | 170 |
| LQM S4UL / C4SL | Benzo(a)pyrene | mg/kg | 3.2 | 35 |
| LQM S4UL | Benzo(b)fluoranthene | mg/kg | 3.9 | 44 |
| LQM S4UL | Benzo(ghi)perylene | mg/kg | 360 | 3900 |
| LQM S4UL | Benzo(k)fluoranthene | mg/kg | 110 | 1200 |
| LQM S4UL | Chrysene | mg/kg | 30 | 350 |
| LQM S4UL | Dibenz(a,h)anthracene | mg/kg | 0.31 | 3.5 |
| LQM S4UL | Fluoranthene | mg/kg | 1500 | 23000 |
| LQM S4UL | Fluorene | mg/kg | 2800 | 63000 |
| LQM S4UL | Indeno(1,2,3,cd)pyrene | mg/kg | 45 | 500 |
| LQM S4UL | Naphthalene | mg/kg | 2.3 | 190 |
| LQM S4UL | Phenanthrene | mg/kg | 1300 | 22000 |
| LQM S4UL | Pyrene | mg/kg | 3700 | 54000 |
| LQM S4UL | TPH Aliphatic EC 5 - 6* | mg/kg | 42 | 3200 |
| LQM S4UL | TPH Aliphatic EC 6 - 8* | mg/kg | 100 | 7800 |
| LQM S4UL | TPH Aliphatic EC 8 - 10* | mg/kg | 27 | 2000 |
| LQM S4UL | TPH Aliphatic EC 10 - 12* | mg/kg | 130 | 9700 |
| LQM S4UL | TPH Aliphatic EC 12 - 16* | mg/kg | 1100 | 59000 |
| LQM S4UL | TPH Aliphatic EC 16 - 35* | mg/kg | 65000 | 1600000 |
| LQM S4UL | TPH Aliphatic EC 35 - 44* | mg/kg | 65000 | 1600000 |
| LQM S4UL | TPH Aromatic EC 5 - 7* | mg/kg | 370 | 26000 |
| LQM S4UL | TPH Aromatic EC 7 - 8* | mg/kg | 860 | 56000 |
| LQM S4UL | TPH Aromatic EC 8 - 10* | mg/kg | 47 | 3500 |
| LQM S4UL | TPH Aromatic EC 10 - 12* | mg/kg | 250 | 16000 |
| LQM S4UL | TPH Aromatic EC 12 -16* | mg/kg | 1800 | 36000 |
| LQM S4UL | TPH Aromatic EC 16 - 21* | mg/kg | 1900 | 28000 |
| LQM S4UL | TPH Aromatic EC 21 - 35* | mg/kg | 1900 | 28000 |
| LQM S4UL | TPH Aromatic EC 35 - 44* | mg/kg | 1900 | 28200 |
| LQM S4UL | Benzene | mg/kg | 0.38 | 27 |
| LQM S4UL | Toluene | mg/kg | 880 | 56000 |
| LQM S4UL | Ethyl Benzene | mg/kg | 83 | 5700 |
| LQM S4UL | Xylene - o | mg/kg | 88 | 6600 |
| LQM S4UL | Xylene - m | mg/kg | 82 | 6200 |
| LQM S4UL | Xylene - p | mg/kg | 79 | 5900 |
| CL:AIRE 2010 | MTBE (methyl tert-butyl ether) | mg/kg | 49 | 7900 |
| Professional Judgement | Asbestos (No visual ACM) | % w/w | <0.001% | ≤0.001 |
| pH | BS3882 | pH Units | NA | 5 - 8.2 |

LQM/CIEH S4ULs copyright Land Quality Manangment Limited reproduced with permission; Publication Number S4UL3237. All rights reserved.

Atkins ATRISK Soil SSVs March 2017.

See LQM/CIEH S4ULs for Human Health Risk Assessment and Atkins ATRISK Soil SSVs documents for notes regarding derivation.

Criteria for PAH and TPH assumes a conservative SOM of 1% - adjustmnets may be made for higher SOM where considred appropriate.

*Soil matrix should contain no free product.

All imported material to have chemical concentrations less than the above levels for the site, with the exception of pH which is a range.

Test results to be provided to the engineer prior to placing soils, where appropriate.

All tests result to be undertaken by a UKAS Laboratory holding accrediation for the relevant tests.

Should be read in conjuntion with any asbestos depth re-use CSM where applicable in corresponding Remedial Strategy.

BROWNFIELD SOLUTIONS LTD

# Quality Control Methodology for Imported and Re-used Soils

**Prior to Importation and Re-use**

Reliable testing results should be provided, or samples should be obtained at the source and tested prior to either importation to the subject site or re-use on site of origin as early as possible.

The frequency and scope of testing will vary depending on the source, the required testing for possible sources is provided below. These rates are based on professional judgement and acceptance of similar criteria used on similar sites to the satisfaction of the local regulatory authority. Results should be compared to the acceptance criteria also with this appendix.

| Material Use | Testing Frequency* | Suite of Analysis | | | | | |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 |
| **Topsoil** | | | | | | | |
| Greenfield Source including Site Won (Top 450mm) | *1 per 250m$^3$ | ■ | ■ | | | | |
| Brownfield/Recycled Source including Site Won (Top 450mm) | **1 per 150m$^3$ | ■ | ■ | ■ | | | |
| **Subsoil** | | | | | | | |
| Greenfield Source (Top 450mm) | *1 per 250m$^3$ | ■ | ■ | | | | |
| Brownfield/Recycled Source (Top 450mm) | **1 per 150m$^3$ | ■ | ■ | ■ | | | |
| Site Won (Top 450mm) | *1 per 150m$^3$ | ■ | ■ | ■ | | | |
| First Generation (i.e. quarried sand) | No testing required. Certificate of material provenance is required. | | | | | | |
| **Physical Stone Break Layer** | | | | | | | |
| First Generation (i.e. quarried stone) | No testing required. Certificate of material provenance is required. | | | | | | |
| Site Generated / Imported 6F2 | *1 per 500m$^3$ | ■ | ■ | ■ | | | |
| **General Fill*** ** | | | | | | | |
| Site Generated / Imported 6F2 | *1 per 1000m$^3$ | ■ | ■ | | | | |
| Site Won Made Ground | *1 per 250m$^3$ | | | | | | ■ |
| | *1 per 1000m$^3$ | ■ | ■ | ■ | | | |
| Site Won Natural Arisings on Brownfield Site | *1 per 1500m$^3$ | ■ | ■ | | | | ■ |
| Site Win Natural Arisings on Greenfield Site | *1 per 2000m$^3$ | ■ | ■ | | | | |

**Notes**

1 – BSL Default Suite - *Arsenic, Cadmium, Chromium (total and hex), Copper, Nickel, Mercury, Lead, Zinc, Selenium, speciated polycyclic hydrocarbons (PAH 16), water soluble sulphate (2:1 Extract), soil organic matter, and pH.*

2 – Asbestos ID (and Quantification if detected).

3 – TPH Analysis - *Speciated Total Petroleum Hydrocarbons (TPH CWG) including BTEX and MTBE.*

4 – VOC Analysis - *Volatile Organic compounds (VOCs) by GC-MS (ex TIC).*

5 – SVOC Analysis - *Semi-Volatile Organic compounds (SVOCs) by GC-MS (ex TIC).*

6 – Visual Inspection & on-site screening for VOC using calibrated PID.

* - Minimum of 3 samples per source.
** Minimum of 6 samples per source.
***To be used at depths >450mm bgl or below building/hardstanding.

The testing should be undertaken at a UKAS accredited laboratory and be MCERTS accredited and all results should be below existing residential guideline values which are presented in Appendix A.

**Topsoil/Subsoil**

The above specification is to determine if material is chemically clean, for suitability as a growing medium reference should be made to BS3882:2015 Specification for Topsoil and BS 8601:2013 Specification for Subsoil and Requirements for Use.

In addition to the above sampling frequencies and testing, all imported topsoil/subsoil should also confirm to the following criteria:

- Have a maximum stone size of 75mm.
- Be clean and free of foreign debris including building waste materials or contaminants e.g. brick, glass, asbestos and plasterboard, etc.

For imported soils, approval should be obtained from the Local Authority prior to importing to site.

**Site Won Crushed Hardcore/Concrete (for use below building/hardstanding only)**

In addition to the above sampling frequencies and testing; for re-use of hardcore/concrete (Grade 6) on the site of origin, BSL proposes the following inspection criteria:

- No visual contamination (oil staining etc).
- Limited deleterious material (organics, wood, etc).
- Limited metal.
- No visible asbestos containing material (ACM).
- Quantifiable Asbestos at or <0.001 w/w%.

Production of Grade 6 materials should be done under WRAP quality protocols or similar. Inspections and sampling would need to be carried out by a qualified geo-environmental engineer. For geotechnical performance, reference should be made to Series 600 Earthworks Guidance.

If the above criteria for asbestos is exceeded, then further consideration and assessment will be required. Works would need to be undertaken in compliance with the Control of Asbestos Regulations (CAR) 2012 and an Asbestos Plan of Works may be required.

**Post Importation**

The imported soils should be inspected on site to confirm it is the same material inspected at source and it is suitable for use. Once imported to site, tests should also be undertaken to confirm the batch is suitable prior to use and has not been contaminated in transit.

A management plan should be in place on site for storage and transportation. The material should be stockpiled separately and well segregated on site to prevent cross contamination in accordance with good site practice.

Accurate records of movement of soils should be kept in order to be incorporated in the final verification report.

Approval should be obtained from the Local Authority prior to use on site.

**Validation and Verification Report**

*Site*
A final verification report should be issued to the Local Authority/Warranty Provider (e.g. NHBC) detailing records of the re-use and importation of soils, alongside their use on the site.

*Cover Layer*
Once the chemical suitability of soils used for a cover system in soft landscaping and garden areas has been confirmed, the material can be placed in these areas.

The depth of the cover layer should be recorded, and photographs taken as evidence to be issued to the Local Authority/warranty provider in the verification report.

Approval for the placement of the cover layer should be obtained from the Local Authority/Warranty Provider.

# APPENDIX B

**Site Visit Records & Chemical Test Results**

Appendix B

# APPENDIX C

**Waste Transfer & Delivery Notes**

Appendix C

# APPENDIX D

**Certificates of Provenance**

Appendix D

# APPENDIX E

**Materials Management Plan**

BROWNFIELD SOLUTIONS LTD

GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

# MORGAN SINDALL

## Star Academy, Radcliffe (MAIN SCHOOL)

Materials Management Plan

TM/C5394/13666
BIM Ref. FS1013-BSL-XX-XX-T-O-1007
Revision: P02

March 2026

## PROJECT QUALITY CONTROL DATA SHEET

| | | | |
|---|---|---|---|
| **Site Name:** | Star Academy, Radcliffe (MAIN SCHOOL) | | |
| **Document Name:** | Materials Management Plan | | |
| **Reference:** | TM/C5394/13666 | | |
| **BIM Ref.** | FS1013-BSL-XX-XX-T-O-1007 | | |
| **Status** | Original / P01 | 03/02/2025 | Original |
| | P02 | 26/03/2026 | Update following retention of topsoil onsite |
| | | | |

**Original Issue P01 – 03/02/2025**

Written by:

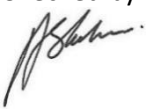


T Mayall
MGeol (Hons) FGS
Senior Project Engineer



P Holland
BSc (Hons) FGS
Geo-Environmental Consultant

Checked by:



A J Stokoe
BSc (Hons) CSci MIEnvSc FGS
Managing Director

CSci Chartered Scientist

Approved by:



A J Stokoe
BSc (Hons) CSci MIEnvSc FGS
Managing Director

CSci Chartered Scientist

**P02 – 26/03/2026**

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Checked by:



D Vowles
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Senior Geo-Environmental Consultant

| APPENDICIES | |
|---|---|
| **Appendix** | **Title** |
| Appendix A | Supporting Information |

## Materials Management Plan (MMP) Form – Based on CL:AIRE October 2014 Version

This form should be completed once the lines of evidence have been marshalled in relation to suitability for use, certainty of use and quantity required.

The answers to the questions posed within this form, together with the supporting information will constitute the MMP and must be provided to the Qualified Person.

A Qualified Person may comment on draft versions of this MMP, but will not complete the Declaration until all the relevant documents, demonstrating lines of evidence have been provided for each site.

The person / organisation who will pay the Declaration fee should confirm that they have read and understand the Terms and Conditions relating to the payment of the Declaration fee to CL:AIRE. These can be found on the CL:AIRE website.

| | |
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| **The person / organisation agreeing to pay the Declaration Fee - Name, organisation and contact details inc. email address** | Tim Mayall<br>Brownfield Solutions Limited<br>William Smith House<br>173 – 183 Witton Street<br>Northwich<br>Cheshire<br>CW9 5LP<br><br>01606 334844<br><br>t.mayall@brownfield-solutions.co.uk |

☑ **I confirm I have read and understood the Terms & Conditions.**

**Each question must be answered. If the question is not applicable please state this and provide a brief explanation.**

1. Specify the scenario to which this MMP relates, as described in the Definition of Waste: Development Industry Code of Practice (DoW CoP) (1, 2, 3 or 4):

☒1. Reuse on the Site of Origin

☐ 2. Direct Transfer of clean naturally occurring soil / mineral materials

☐ 3. Cluster Project

☐ 4. Combination of any of the above

In the case of a combination of reuse scenarios, please describe it below (e.g. (i) Reuse on Site of Origin and Direct Transfer of clean naturally occurring unpolluted soils, (ii) Reuse on the Site of Origin with Direct Transfer of clean naturally occurring soil to x number of development sites etc.:

Work will comprise a combination of re-use of site-won made ground and site-won crushed materials as part of a cut and fill programme in order to achieve the agreed site levels.

The project may also require direct transfer of clean, naturally occurring unpolluted soils and clean aggregates but this MMP will be declared as and when further details on these materials is available.

Topsoil within the field in the north-west of the site will be retained for use within the clean cover system in soft landscaping areas.

(NB: A Declaration is required for reuse on the Site of Origin and for any 2 site arrangement i.e. there is no facility for a combination Declaration)

Note - revisions to the MMP do not trigger an additional Declaration by a Qualified Person, unless an additional site is added to the project.

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| 2. Organisation and name of person preparing this MMP | Tim Mayall<br>Brownfield Solutions Limited<br>William Smith House<br>173 – 183 Witton Street<br>Northwich<br>Cheshire<br>CW9 5LP<br>01606 334844<br>t.mayall@brownfield-solutions.co.uk |

**Site Details**

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| 3. Site / Project name(s) | Star Academy, Radcliffe (Main School) |
| Reuse / receiving site name including Postcode: | Star Academy, formerly Spring Lane School, Spring Lane, Radcliffe, Manchester, M26 2SZ |
| Grid Reference: | 378752, 407520 |
| Donor site name (if Direct Transfer) | Donor Sites TBC |

**Landowners**

| | |
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| 4a. Name of Landowner(s) (full address and contact details) – where excavated materials are to be reused | Department for Education<br>Free Schools Capital – North West<br>Store Street, Manchester, M1 2WD<br><br>Richard Storey (Project Director)<br>Richard.storey@education.gov.uk<br>T. 07967 368 815 |
| 4b. Name of Landowner(s) (full address and contact details) – where excavated materials are arising from | Department for Education<br>Free Schools Capital – North West<br>Store Street, Manchester, M1 2WD<br><br>Richard Storey (Project Director)<br>Richard.storey@education.gov.uk<br>T. 07967 368 815<br><br>Landowner(s) of Donor Site(s)s - TBC |

## Summary and objectives

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| 5a. Provide a brief description of the planned project and how excavated materials are to be reused. | The current site topography currently gently slopes down towards the south-east, and slopes more steeply between the field in the west and the existing car park areas in the east with a circa 2m change in elevation.<br><br>The proposed construction on-site will require a level formation for the proposed new building, car parking and MUGA pitches, which will require regrading of the site, combining cut and fill operations. There will be a cut on the order of up to 2.5m in the north-west of the site, with the magnitude of the cut becoming gradually smaller towards the east. Cut materials will generally be used for a land raise within the south-east areas of the proposed building footprint (up to a maximum of circa 2.5m of fill). The proposals are indicated on a cut and fill heat map which is enclosed alongside a sketch drawing detailing areas of cut and fill alongside calculated volumes provided by the earthworks contractor.<br><br>Filling works will be undertaken in accordance with BSL Earthworks Specification ref. TM/C5394/12387 Rev A (BIM Ref. FS1013-BSL-XX-XX-T-O-1002).<br><br>Treatment of some site-won soils will be undertaken in the form of lime stabilisation. Reference should be made to the Earth-Tech Solutions Soil Stabilisation Design Report Ref. ETS/CL/P25071-01 dated January 2025. Stabilisation requirements are summarised as follows:<br><br>• Car Park: the addition of ≥2.5% CEM II to all materials within the upper 300mm of this area to achieve the required specification of a 15% laboratory soaked CBR. This area is estimated to be 6,249m2 or a volume of 1,874m3.<br><br>• 3G Pitch and MUGA: the addition of ≥4.0% CEM II to all materials within the upper 300mm of this area to achieve the required specification of a 30% laboratory soaked CBR with non-frost susceptibility. These areas are estimated to be 7,895m2 or a volume of 2,368m3.<br><br>It will be necessary to carry out the earthworks in phases with the majority of the works carried out within an initial 10 week programme beginning in mid-February 2025 but some works including placement of stabilised materials beneath the MUGA towards the end of the programme after the temporary accommodation and Morgan Sindall site compound can be removed from the site (as shown on the Morgan Sindall Sketch Logistics Plan, drawing ref. FS1013-ALA-EX-ZZ-D-L-9003-P07. Therefore, it will be necessary to temporarily stockpile approximately 540m3 of stabilised material to eventually be used within the south-eastern area of the wider site within the upper 300mm of the MUGA.<br><br>Material will be imported to the site via direct transfer of clean naturally occurring soils (with this MMP updated as details of import sites become available), as well as aggregates (recycled 6F2 and quarried MOT Type 1) in order to raise site levels to the agreed development platform in accordance with the earthworks specification. |

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| | The site will generate a net surplus of material which is expected to be surplus to requirements and will therefore be disposed off-site (circa 10,362m3 of general arisings and 4,237m3 of topsoil).<br><br>As part of the remedial requirements onsite, a clean cover system is required within the soft landscaping areas. In order to achieve a more sustainable material turnover, a portion of the topsoil within the existing field in the north-west of the site will be retained for the clean cover system. Out of the 4,237m3 to be stripped onsite, 1,830m3 will be retained for onsite re-use. |

**General Plans and Schematics**

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| 6. **Attach** a location plan for the site(s) and a plan of the site(s) which identifies where different materials are to be excavated from, stockpile locations (if applicable), where materials are to be treated (if applicable) and where materials are to be reused. | Site Location Plan C5394/01<br>Ares Landscape Architects Ltd, Whole Site Plan, drawing number FS1013-ALA-EX-ZZ-D-L-0001-S4-P02.<br>Star Academy Cut and Fill Heatmap |
| 7. **Attach** a schematic of proposed materials movement. Where there is only one source area and one placement area briefly describe it. For all other projects a schematic is required. | The earthworks will be broadly split into two phases based on contractual structure; the bulk earthworks for the main school cut and fill, and the access road.<br><br>For the Main Cut and Fill Works, volumetrics are summarised on the following BSL Schematic Flow Charts:<br>C5394/FC01 (Cut / excavate and dispose off site)<br>C5394/FC03 (Fill / Re-use)<br>C5394/FC04 (Fill / Importation)<br><br>For the Access Road Works, volumetrics are summarised on the following BSL Schematic Flow Charts:<br>C5394/FC02 (Cut / excavate and dispose off site)<br>C5394/FC05 (Fill / Importation)<br>No re-use of site-won materials is currently proposed as part of the access road works. |

**Parties Involved and Consultation – if more than one party please provide additional details for them and identify the location that they will be working e.g. where a site is zoned.**

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| 8a. Main earthworks contractor(s) (full address and contact details) – Where excavated materials are to be reused. | David Keating (Senior Contracts Manager)<br>Chartrange Ltd, Wharf Street, Dukinfield, SK16 4NJ<br>0161 339 4949 |
| 8b. Main earthworks contractor(s) (full address and contact details) - Where excavated materials are arising from (Donor Site). | Donor Sites TBC |

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| 9. Treatment contractor(s) (full address and contact details) – for treatment on site of origin, or at a Hub site within a fixed STF / Cluster Project | David Keating (Senior Contracts Manager)<br>Chartrange Ltd, Wharf Street, Dukinfield, SK16 4NJ<br>0161 339 4949 |

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| 10. Where wastes and materials are to be transported between sites, provide details of the transport contractor(s) (full address, contact details and waste carriers registration details (if applicable)) | Chartrange Ltd, Wharf Street, Dukinfield, SK16 4NJ<br>0161 339 4949<br><br>Waste Carrier Licence CBDU117542 |
| 11. Provide Local Authority contact details (full address and named contacts) where excavated materials are to be reused | Rebecca Jones<br>Bury Council<br>3 Knowsley Place<br>Duke Street<br>Bury<br>BL0 0EJ<br>Rebecca.jones@bury.gov.uk<br>0161 253 6392 |
| 12a. For the site where materials are to be reused and for Hub Site locations provide Environment Agency contact details (full address and named contacts): | Richard Bostock<br>Environment Agency<br>Richard Fairclough House<br>Knutsford Road<br>Latchford<br>Warrington<br>Cheshire<br>WA4 1HT<br>03708 506506 |
| **For all Cluster Projects:**<br><br>12b. Attach any relevant documentation from the EA relating to the excavation and reuse of the materials to demonstrate no objection to the proposals (see 3.37 of DoW CoP).<br>If the EA has not been consulted please explain why (see paragraph 3.39 of the DoW CoP). | N/A |

## Lines of Evidence

There is no one single factor that can be used to decide that a substance or object is waste, or when it is, at what point it ceases to be waste; as complete a picture as possible has to be created.

The following sections require completion to ensure the correct decision is made.

If a requested item is not relevant it is important to clearly state why this is so (e.g. no planning permission required because permitted development status exists).

## Suitable for use criteria

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| 13. Please describe or provide copies of the required specification(s) for the materials to be reused on each site. | The chemical specification for reuse of materials on site is set out in Appendix A of the BSL Report JM/C5394/12387 Rev A (BIM Reference FS1013-BSL-XX-XX-T-O-1001 Rev P02) Remedial Strategy dated July 2024. |
| Where contamination is suspected or known to be present<br><br>14a. Please provide copies of or relevant extracts from the risk assessment(s) that has been used to determine the specification for use on the site. This must relate to the place where materials are to be used. This must be in terms of (i) human health (ii) controlled waters and (iii) any other relevant receptors. If a risk assessment is not relevant for a particular receptor given the site setting please explain why below: | Phase II Geo-Environmental Assessment Report, ref. PH/C5394/12387 Rev D ( FS1013-BSL-XX-XX-T-O-1000 Rev P05) dated July 2024.<br><br>The Qualitative Risk Assessment, section 8.8, concluded the overall risk to human health was low to moderate, whereas the overall risk to controlled waters was low.<br><br>Any residual risks from contaminants within the made ground will be broken via installation of a clean cover system in soft landscaping areas.<br><br>*Re-use of site-won crushed material from demolition works*<br><br>A total of 1250 $m^3$ of 6F2 derived from crushed demolition material remains stockpiled on site. This material has previously been tested and assessed as suitable for use within the overall site, and is surplus from the Temporary Accommodation construction works completed in August 2024 within the wider site boundary. As detailed within section 5.4 of the Remediation Validation Report, ref. TM/C5394/13333 Rev A for the Temporary Accommodation site, "Given the ongoing requirements for suitable engineered fill as part of the redevelopment of the site as a whole, the remaining site-won 6F2 will be re-used as general fill within the upcoming redevelopment and declared under the new MMP for the main school (i.e. this document) and is therefore not considered to be surplus to requirements for the project as a whole."<br><br>The suitability for the site-won 6F2 derived from crushed demolition material is demonstrated within section 5.2 of the Remediation Validation Report, ref. TM/C5394/13333 Rev A for the Temporary Accommodation site: "BSL carried out carried out visual inspection and sampling of the site won fill on 23rd May 2024…The results confirm the results to be below the relevant screening criteria and are therefore considered acceptable for use as general fill beneath buildings and hard standing."<br><br>Chemical testing of the stockpiled 6F2 and assessment is enclosed in the supporting information (i2 analytical report 24-022856 samples SP01-SP03). A summary assessment sheet is also enclosed and reveals 1 No. sample of the crushed material contains elevated concentrations of PAHs. However, given the crushed material will be re-used as engineered fill within a |

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| | temporary haul road, in this setting the material is suitable for use and poses no additional risk to human health or controlled waters.<br><br>*Re-use of site-won made ground*<br><br>Chemical testing of site-won made ground has been completed as part of the site investigations undertaken to date by both BSL and Geotechnics. Summary Assessment spreadsheets are provided which detail the available chemical testing. Lab report refs. i2 Analytical 23-52916 and DETS 22-08937<br><br>The results confirm the presence of elevated concentrations of PAHs and heavy metals within the made ground. Despite the elevated concentrations of PAHs and heavy metals, the made ground will be re-used beneath areas of buildings and hard-standing, or in soft landscaping at depths >450mm below finished levels. In this setting (i.e. low-sensitivity areas) the material is suitable for use and poses no additional risk to human health or controlled waters and is compliant with the Remedial Strategy.<br><br>*Re-use of site-won topsoil*<br><br>Chemical testing of the topsoil onsite was completed by BSL as part of the site investigations undertaken to date. Summary Assessment spreadsheets are provided which detail the available chemical testing. lab report ref. i2 Analytical 23-52916.<br><br>Two samples were tested against a general suite of testing, including metals, PAHs, pH and SOM. When screened against criteria for residential without homegrown produce (2.5%), there were no exceedances recorded. Therefore this provisional testing suggests the topsoil is suitable for re-use within the clean cover system onsite, subject to further testing in line with the frequency of testing outlined in the Remedial Strategy. |
| 14b. Please attach any relevant documentation from the LA relating to the excavation and reuse of the materials to demonstrate no objection (see 3.37 of the CoP). | Planning Permission for the site issued by Bury Metropolitan Borough Council. Application number: 70071, dated 12/09/2023.<br><br>Condition 3: "No development shall commence unless and until: ……Where remediation/protection measures is/are required, a detailed Remediation Strategy shall be submitted to, and approved in writing by, the Local Planning Authority."<br><br>The Remedial Strategy (Ref. JM/C5394/12387 Rev A / BIM Reference FS1013-BSL-XX-XX-T-O-1001-P02 |

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| | describes the re-use of materials in accordance with an MMP under the DoWCoP.<br><br>In addition, email correspondence dated 10th April 2024 from Rebecca Jones at Bury Metropolitan Borough Council states no objection to the use of an MMP on the site and confirms discharge of pre-commencement planning conditions. |
| 14c. Please attach any relevant documentation from the EA relating to the excavation and reuse of the materials to demonstrate no objection (see 3.37 and Table 2 of the CoP). | The Remediation Strategy (Ref. JM/C5394/12387 Rev A / BIM Reference FS1013-BSL-XX-XX-T-O-1001-P02) outlines the re-use of materials, this report has been submitted and no comments have been made.<br><br>In addition, email correspondence dated 26th April 2024 from Stephen Bostock (Environment Agency Waste Enquiries) states no objection to the use of the DoWCoP on the site. |
| 14d. Please attach any relevant documentation from any other regulators (if relevant) relating to the excavation and reuse of the materials to demonstrate no objection (see 3.37 of the CoP). | N/A |

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| ***Where contamination is not suspected***<br><br>15a. Please attach copies or relevant extracts from the Desk Top Study that demonstrates that there is no suspicion of contamination. | To be updated with proposed imported material once donor site(s) have been identified. |
| 15b. Please attach copies of or relevant extracts from the site investigation/testing reports that adequately characterise the clean materials to be used (if appropriate). | To be updated with proposed imported material once donor site(s) have been identified. |
| 15c. Please attach copies of any other relevant information (if available) confirming that land contamination is not an issue. | N/A |

**NB: It is your responsibility to assess the nature of the material to be used and that it fits within the limitations of the scenario under which it is to be used.**

## Certainty of use

Various lines of evidence are required to demonstrate that the materials are certain to be used. This includes:

- The production of this MMP
- An appropriate planning permission (or conditions that link with the reuse of the said materials)
- An agreed Remediation Strategy(ies)
- An agreed Design Statement(s)
- Details of the contractual arrangements

Please identify in the following sections what lines of evidence relate to the site(s) **where the materials are to be used**.

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| 16a. Planning Permission(s) relating to the site where materials are to be reused<br><br>Please provide a copy of the relevant planning permission. | Planning Permission issued by Bury Metropolitan Borough Council. Application number: 70071, dated 12/09/2023. |
| 16b. Explain how the reuse of the excavated materials fits within the planning permission(s) for each site. | Planning Permission issued by Bury Metropolitan Borough Council. Application number: 70071, dated 12/09/2023.<br><br>Conditions 3 and 4 detail the remediation of contaminated material and the need for a Remediation Strategy and Remediation Strategy, along with a Remediation Verification report to confirm the remedial works have been undertaken as approved and have been done so successfully.<br><br>The Remedial Strategy (Ref. JM/C5394/12387 Rev A / BIM Reference FS1013-BSL-XX-XX-T-O-1001-P02) describes the re-use of materials in accordance with an MMP under the DoWCoP.<br><br>Site levels will be engineered in line with the agreed finished floor levels submitted to planning. |
| 16c. If planning permission is not required for any one site please explain why below e.g. permitted development, clean up of a chemical spill, surrender of an Environmental Permit, re-contouring within the existing permission. | N/A |
| ***Where contamination is suspected or is known to be present***<br><br>17. Please provide a copy of any Remediation Strategy(ies) that have been agreed with relevant regulators. | Brownfield Solutions Ltd report reference 'JM/C5394/12387 Rev A / BIM Reference FS1013-BSL-XX-XX-T-O-1001-P02 dated July 2024. |

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| ***Where contamination is not suspected***<br><br>18. Please provide a copy of any Design Statement(s) that have been agreed (e.g. with the planning authority or in the case of permitted developments the client). | N/A |

## Quantity of Use

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| 19. Please provide a breakdown of the excavated materials for each site and how much will be placed at each site or sub area of each site. | The earthworks will be broadly split into two phases based on contractual structure; the bulk earthworks for the main school cut and fill, and the access road.<br><br>For the Main Cut and Fill Works, volumetrics are summarised on the following BSL Schematic Flow Charts:<br>C5394/FC01 (Cut / excavate and dispose off site)<br>C5394/FC03 (Fill / Re-use)<br>C5394/FC04 (Fill / Importation) |

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| Where this is not specific to a single readily identifiable source refer to an annotated plan, schematic or attach a tabulated summary. | For the Access Road Works, volumetrics are summarised on the following BSL Schematic Flow Charts:<br>C5394/FC02 (Cut / excavate and dispose off site)<br>C5394/FC05 (Fill / Importation)<br>No re-use of site-won materials is currently proposed as part of the access road works.<br><br>Made ground arisings, such as from an initial reduced level dig, and from foundation and service trench arisings, will be disposed off-site and the shortfall compensated for by a combination of re-use of crushed site-won material produced from demolition, in addition to importation of direct transfer of clean, naturally occurring unpolluted soils and clean aggregates.<br><br>Volumetrics provided by the client are summarised as follows.<br><br>*Summary of cuts / excavate and dispose off-site (Main Cut and Fill Works):*<br><br>1. Reduce Levels Excavation, foundations, service trenches etc– 10,362 $m^3$<br>2. Topsoil scrape – 4,237 $m^3$<br><br>Summary of cuts / excavate and dispose off-site (Access Road Works):<br><br>1. Reduce Levels Excavation– 1,439$m^3$<br>2. Topsoil scrape – 1,251$m^3$<br>3. Former Hard Standing – 389$m^3$<br><br>**Total quantity to be excavated and disposed off-site: 12,769$m^3$ (Main Cut and Fill) and 3,079$m^3$ (Access Road Works) = 15,847$m^3$**<br><br>**As of March 2026 1,830$m^3$ of the 4,237 $m^3$ of topsoil onsite will be retained for re-use in the clean cover system.**<br><br>*Summary of re-use on site of origin, crushed material sourced from demolition (Main Cut and Fill Only):*<br><br>1. Cut from western areas, fill to upper 300mm of car park, including stabilisation addition of 2.5% CEM II – 1920$m^3$<br>2. Cut from western areas, fill to upper 300mm of 3G and MUGA, including stabilisation addition of 4% CEM II – 2462$m^3$<br>3. Cut from western areas, fill to other areas of the east of the site – 1757$m^3$<br>4. 6F2 remaining from demolition – 1250$m^3$<br>5. Topsoil from western site strip – 1,830$m^3$<br><br>**Total quantity of site won material to be re-used on site = 9,219$m^3$**<br><br>*The following quantities are required to be imported (Main Cut and Fill Works)*<br><br>1. Imported suitable fill including subsoil and topsoil – 1,455$m^3$ |

2. Imported suitable fill to organic material hotspot beneath building footprint – 150m$^3$
3. Imported 6F2 – 4,395m$^3$
4. Imported MOT Type 1 – 1,932m$^3$

The following quantities are required to be imported (Access Road Works)

1. Imported suitable fill – 2,756m$^3$
2. Imported 6F5 capping – 1,351m$^3$

**Total quantity to be imported: 7,932m$^3$ (Main Cut and Fill) and 4,107m$^3$ (Access Road Works) = 12,039m$^3$**

*Donor Sites*

The exact nature and source of imported fill is not yet known, and therefore this MMP will be updated and re-declared once further details are available. A running total of the imported material to make up the site deficit will be detailed in the table below once donor sites and specific materials are confirmed:

| Donor Site No. | Site Name | Material Description | Declared Volumes in m$^3$ (this MMP) | Running Total Volumes in m$^3$ | Volume to be declared on this MMP (m$^3$) |
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Total volume to be declared on this MMP = 9,219m$^3$of **site won material** re-used on the site of origin.

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| 20a. How has consolidation/compaction being considered in the above mass balance calculations? | Compaction to the site-specific Earthworks Specification will be undertaken and has been taken into consideration. |
| 20b. How has loss due to treatment being considered in the above mass balance calculations (if applicable)? | N/A |

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| 20c. How has the addition of treatment materials being considered in the above mass balance calculations (if applicable)? | Materials re-used within the upper 300mm of the car park, 3G and MUGA pitch require stabilisation in the form of addition of cement. As detailed in the Soil Stabilisation Design report, an additional 2.5% to 4% of cement will be added to site won soils prior to re-use in these areas, which has been included and explained within the mass balance calculations presented in Section 19. |

**Contingency arrangements**

Explain what is to happen in the following situations and **identify the appropriate clauses** in the contract(s) (Such clauses must be provided to the Qualified Person, preferably as a summary document): or

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| 21a. What is to happen to, and who is to pay for out of specification materials? | The main contractor on site (Chartrange) will be responsible for resolving or removing out of specification materials as part of pre-agreed contractual arrangements. Should problems arise with the main contactor (e.g. insolvency), then Morgan Sindall should become responsible and would appoint an appropriate subcontractor to deal with any out of specification materials.<br>Resolution of issues may include providing for additional treatment or agreeing an alternative acceptable location for use (subject to being demonstrably suitable for use in that alternative location).<br>*It is assumed that pollution control measures in relation to dusts, odours, spills, invasive species etc are covered in other documentation. |
| 21b. What is to happen to, and who is to pay for any excess materials? | Any excess materials to be disposed off site to suitable facility as per material flow chart.<br>The main contractor on site (Chartrange) will be responsible for the costs associated with removing any excess materials as part of pre-agreed contractual arrangements. Should problems arise with the main contactor (e.g. insolvency), then Morgan Sindall should become responsible and would appoint an appropriate subcontractor to deal with any out of specification materials. |
| 21c. What happens if the project programme slips in relation to excavated materials or materials under -going treatment? | The risk of significant project overrun with relation to excavated materials is considered to be low.<br>In the event that programme slips and intended re-use of materials was not feasible within the timescales allowed by the programme, then Morgan Sindall would arrange for a subcontractor to dispose of the materials off site expediently. |
| 21d. Other identified risk scenarios for the project (relating to excavated materials)? | N/A |

**The Tracking System**

Where contamination is suspected, or known to be present, state the procedures put in place to:

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| 22a. For all sites please describe the tracking system to be employed to monitor materials movements. | The materials tracking form is provided in Appendix B and it will be the responsibility of the site manager to maintain the tracking system and other suitable records, including drawings of stockpile locations etc. |
| ***Where contamination is suspected or known to be present, state the procedures put in place to:***<br>22b. Prevent contaminants not suitable for the treatment process being accepted. | N/A |
| ***Where contamination is suspected or known to be present, state the procedures put in place to:***<br>22c. Prevent cross contamination of materials not in need of treatment, wastes awaiting treatment and treated materials. | A remediation engineer will undertake a watching brief during the excavation and turnover to identify any unexpected contamination, determine the route of excavated material based on field screening and ensure the surveying of final excavations. The engineer will collect validation samples from the excavation where required to ensure contamination has been removed. Good stockpile management processes and segregation of materials will be implemented |
| ***Where contamination is suspected or known to be present, state the procedures put in place to:***<br>22d. Demonstrate that materials that do not require treatment and successfully treated materials reach their specific destination. | Control of materials will be via the materials tracking form, with records of tests and stockpiles as per the flow chart, presented in the supporting information. |
| ***Where contamination is suspected or known to be present, state the procedures put in place to:***<br>22e. Ensure that waste for off-site disposal or treatment is properly characterised and goes to the correct facility. | Control of materials will be via the materials tracking form and spreadsheets. |

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| 23. Please attach a copy of the tracking forms / control sheets that are to be used to monitor materials movements.<br>To include transfer of loads on site into stockpiles prior to treatment (if applicable), stockpiled after treatment (if applicable), stockpiled awaiting use (as appropriate) and final placement. | BSL materials tracking form. |

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| ***For Hub Sites within Cluster Projects & where materials need treatment before reuse:***<br>24. Please attach a copy of the Environmental Permit covering the treatment process.<br>Alternatively, if the treatment is covered by a Mobile Plant Permit and associated Deployment Form, attach a copy of the EA agreement to the Deployment Form. | N/A |

**Records**

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| 25. Where, and in what form, are records to be kept?<br><br>Note – records e.g. transfer notes, delivery tickets, Desk Top Study, Site Investigation, Risk Assessment(s), Verification Report(s) need to be kept for at least 2 years after the completion of the works and production of the Verification Report. | Brownfield Solutions will collate all the records supplied by the contractor at the end of the contract and present a full electronic copy of the data to Morgan Sindall. A backup copy of the records will also be available from Brownfield Solutions Limited for at least 2 years. |

**Verification Plan**

| | |
|---|---|
| 26. Provide or explain the Verification Plan which sets out how you will record the placement of materials and prove that excavated materials have been reused in the correct location and in the correct quantities within the development works (see 3.4 of the DoW CoP). | Tracking forms/excel spreadsheets and stockpile plans will monitor the movement of the material. Periodic survey records of the filling as the works progresses will be maintained by the contractor. A photographic record will also be kept as the work progresses.<br><br>Outline of the verification plan is provided in the supporting information. |
| Estimated Date of issue of Verification Report | 03/02/2026 |
| Persons responsible for producing the Verification Report: | Tim Mayall<br>Brownfield Solutions Limited<br>William Smith House<br>173 – 183 Witton Street<br>Northwich<br>Cheshire<br>CW9 5LP<br>01606 334844<br>t.mayall@brownfield-solutions.co.uk |

# APPENDIX A

**Supporting Information**

***This can be accessed via the link below:***

*Appendix A Supporting Information*

***Should you have any issues accessing the above link, please contact Brownfield Solutions.***

## North West

**William Smith House**
**173 – 183 Witton Street**
**Northwich**
**Cheshire**
**CW9 5LP**

**Tel: 01606 334 844**

## Midlands

**Unit 5, Alfred Court**
**Saxon Business Park**
**Stoke Prior**
**Bromsgrove**
**Worcestershire**
**B60 4AD**

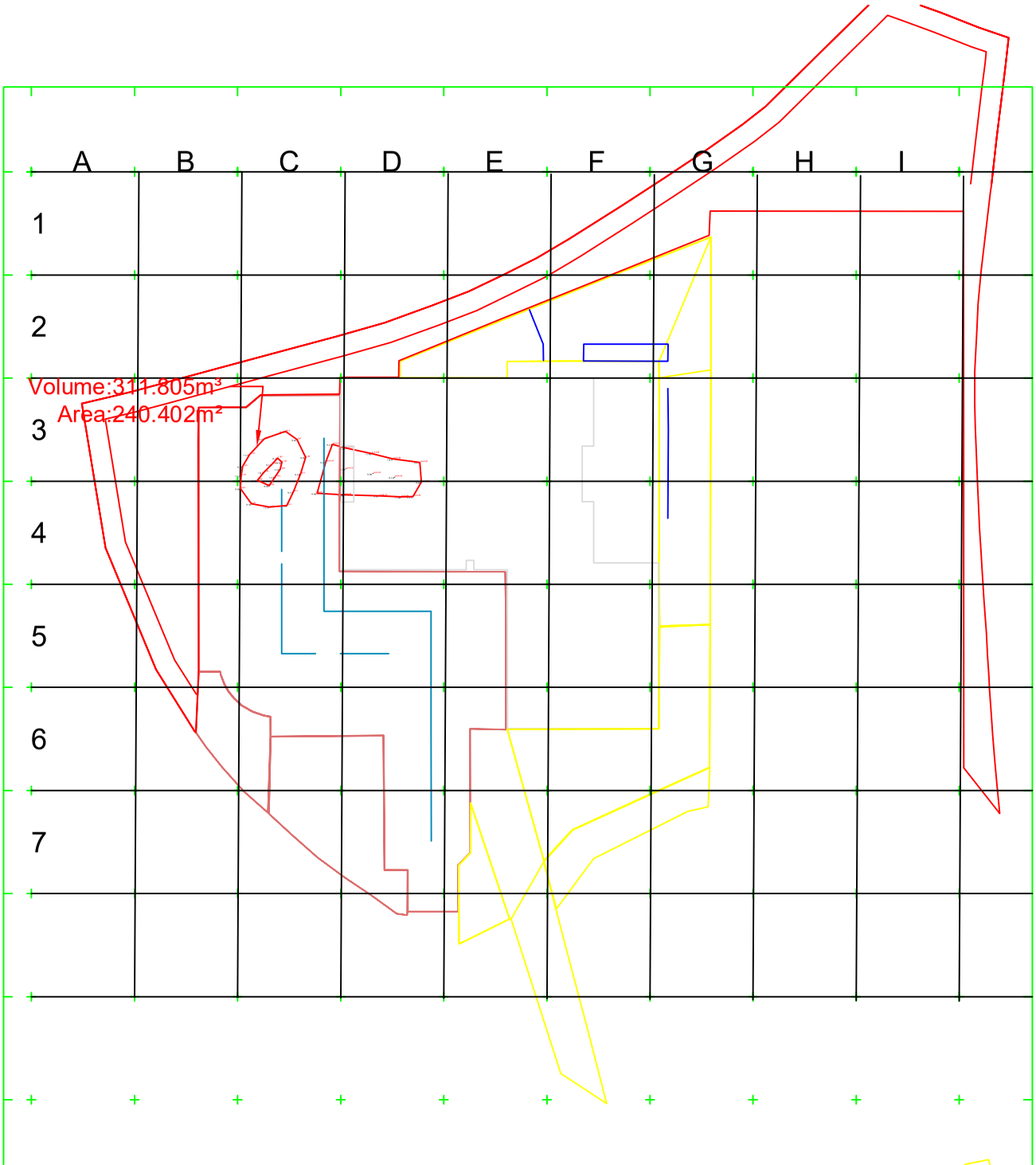
**Tel: 01215 729014**

**www.brownfield-solutions.com**

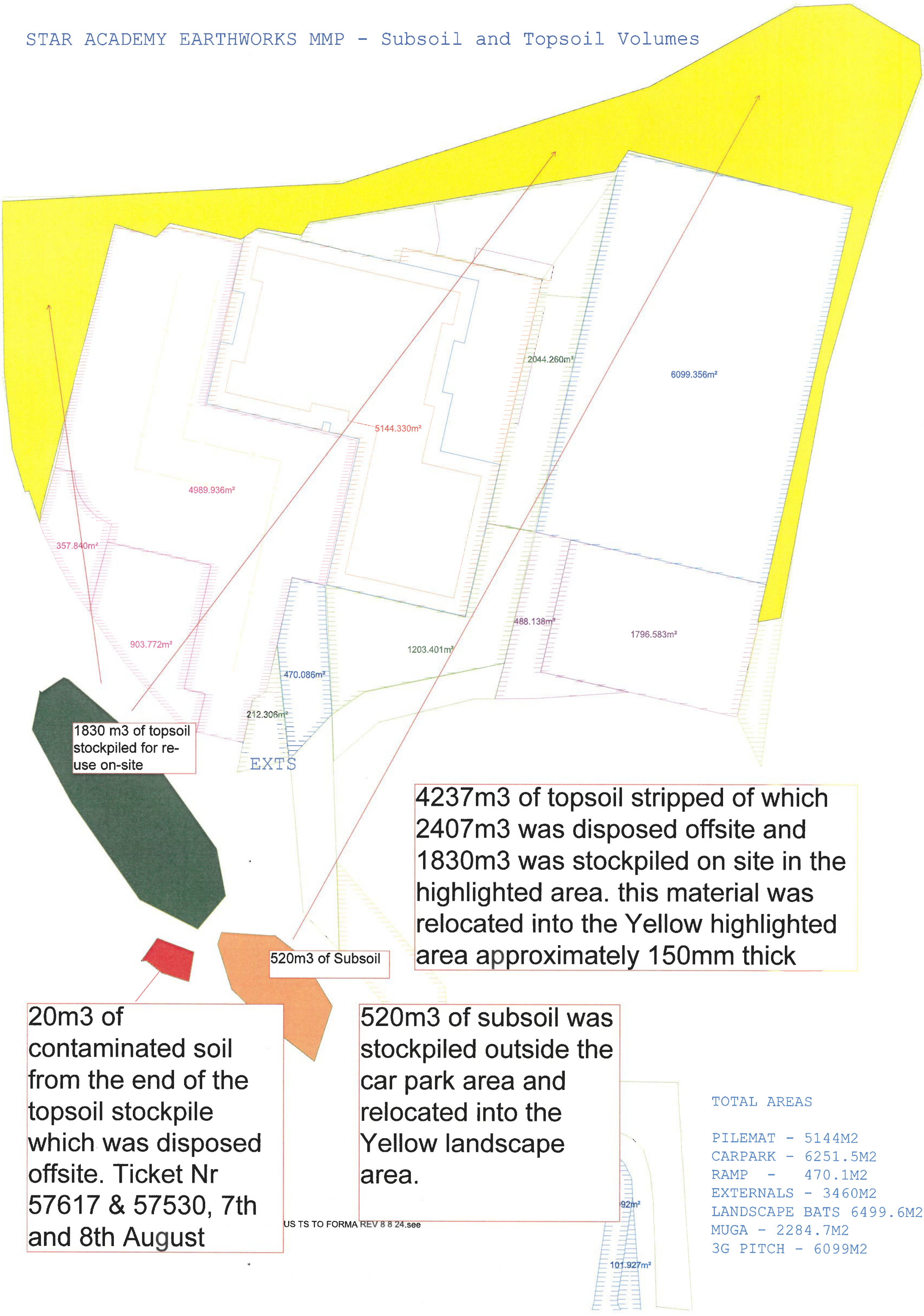



# APPENDIX F

**Materials Movement Records**


A
B
C
D
E
F
G
H
I
1
2
3
4
5
6
7
Volume:311.805m³
Area:240.402m²

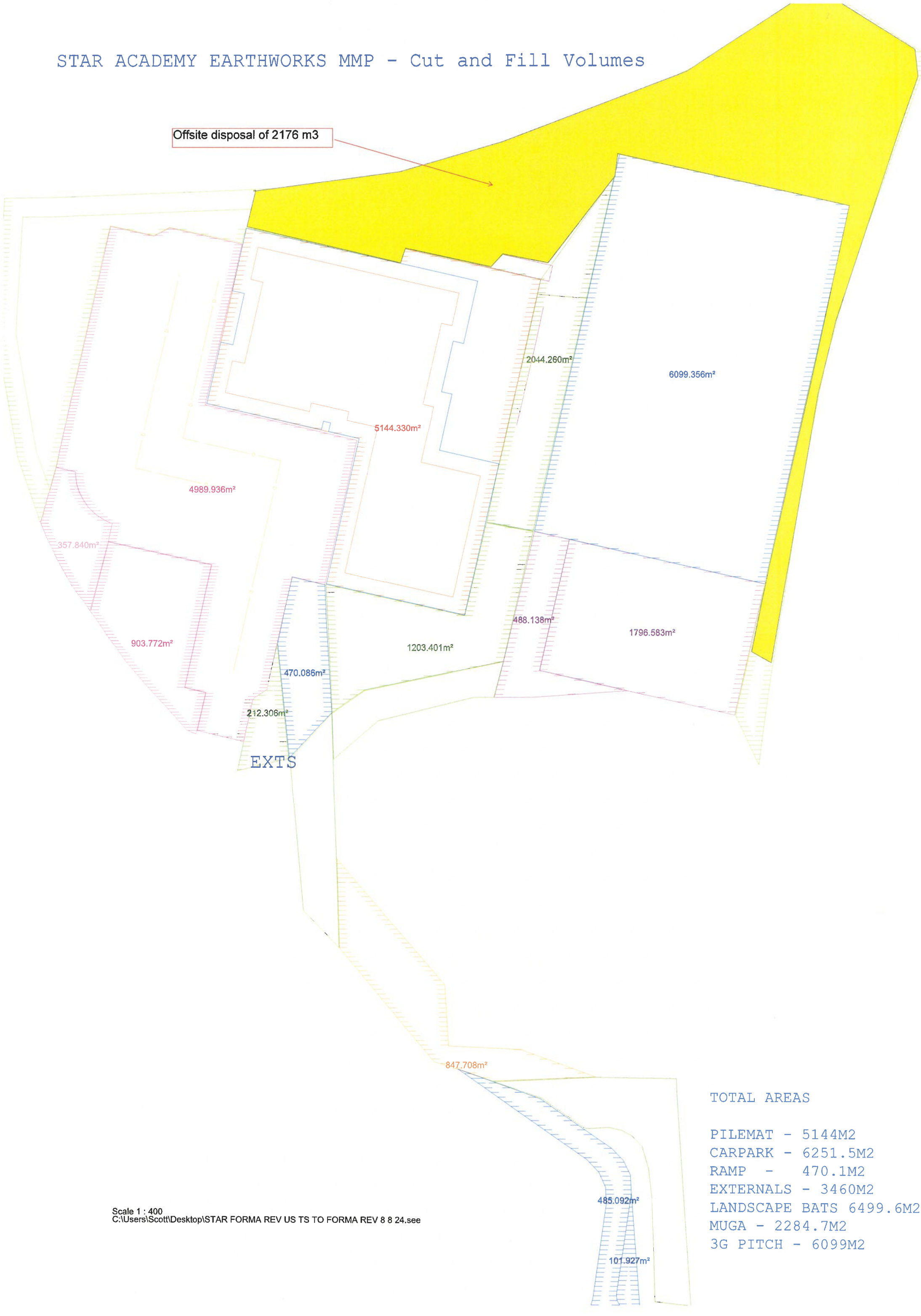
# STAR ACADEMY EARTHWORKS MMP - Subsoil and Topsoil Volumes




TOTAL AREAS

PILEMAT - 5144M2
CARPARK - 6251.5M2
RAMP - 470.1M2
EXTERNALS - 3460M2
LANDSCAPE BATS 6499.6M2
MUGA - 2284.7M2
3G PITCH - 6099M2

# STAR ACADEMY EARTHWORKS MMP - Cut and Fill Volumes




Scale 1 : 400
C:\Users\Scott\Desktop\STAR FORMA REV US TS TO FORMA REV 8 8 24.see

TOTAL AREAS

PILEMAT - 5144M2
CARPARK - 6251.5M2
RAMP - 470.1M2
EXTERNALS - 3460M2
LANDSCAPE BATS 6499.6M2
MUGA - 2284.7M2
3G PITCH - 6099M2

# STAR ACADEMY EARTHWORKS MMP - Cut and Fill Volumes




Scale 1 : 400
C:\Users\Scott\Desktop\STAR FORMA REV US TS TO FORMA REV 8 8 24.see

TOTAL AREAS

PILEMAT - 5144M2
CARPARK - 6251.5M2
RAMP - 470.1M2
EXTERNALS - 3460M2
LANDSCAPE BATS 6499.6M2
MUGA - 2284.7M2
3G PITCH - 6099M2

# STAR ACADEMY EARTHWORKS MMP - Cut and Fill Volumes




Scale 1 : 400
C:\Users\Scott\Desktop\STAR FORMA REV US TS TO FORMA REV 8 8 24.see

TOTAL AREAS

PILEMAT - 5144M2
CARPARK - 6251.5M2
RAMP - 470.1M2
EXTERNALS - 3460M2
LANDSCAPE BATS 6499.6M2
MUGA - 2284.7M2
3G PITCH - 6099M2

# STAR ACADEMY EARTHWORKS MMP - Cut and Fill Volumes




Scale 1 : 400
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TOTAL AREAS

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CARPARK - 6251.5M2
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LANDSCAPE BATS 6499.6M2
MUGA - 2284.7M2
3G PITCH - 6099M2

# STAR ACADEMY EARTHWORKS MMP - Cut and Fill Volumes

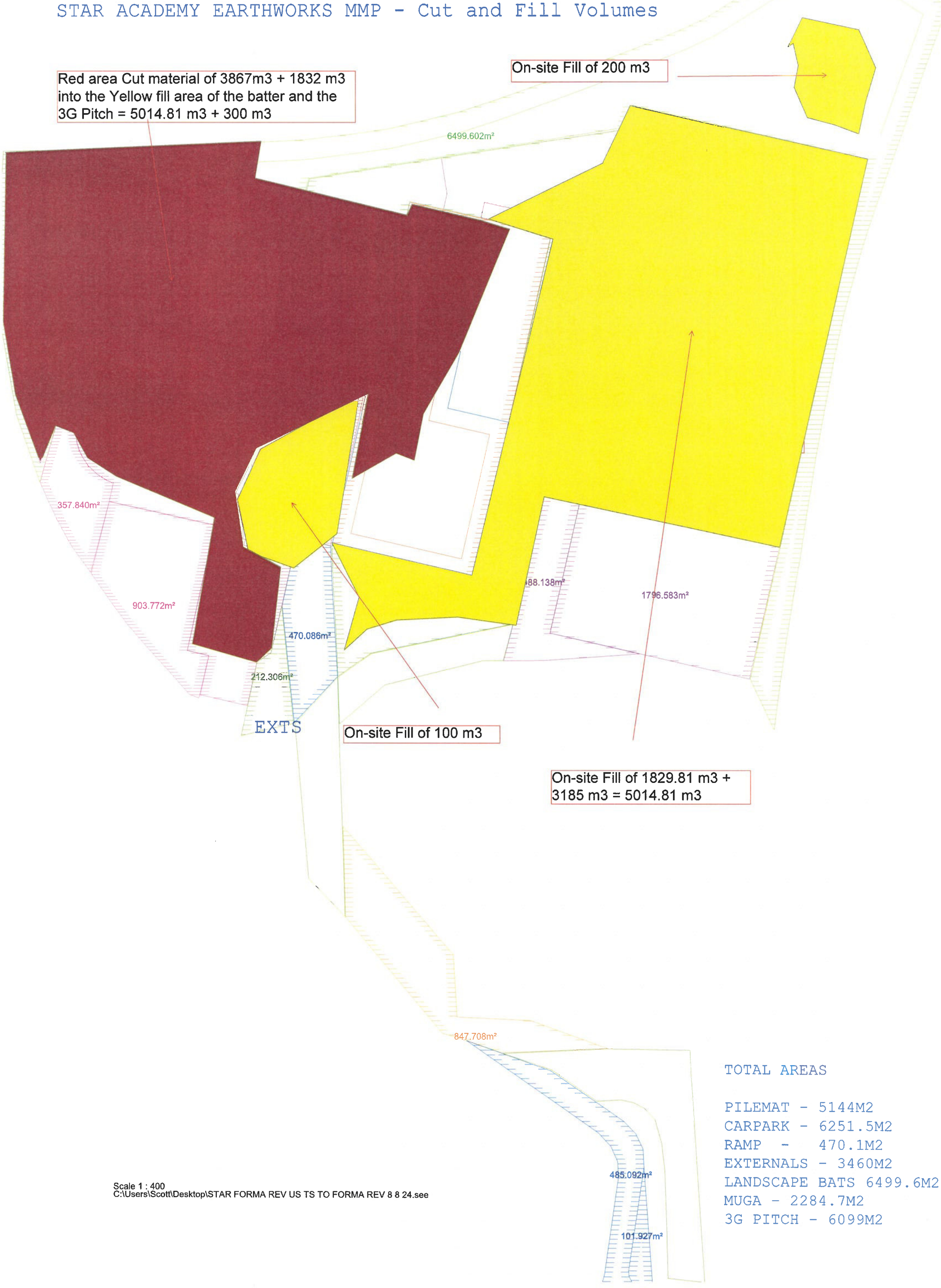



Scale 1 : 400
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TOTAL AREAS

PILEMAT - 5144M2
CARPARK - 6251.5M2
RAMP - 470.1M2
EXTERNALS - 3460M2
LANDSCAPE BATS 6499.6M2
MUGA - 2284.7M2
3G PITCH - 6099M2

# STAR ACADEMY EARTHWORKS MMP - Cut and Fill Volumes




Scale 1 : 400
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## TOTAL AREAS

PILEMAT - 5144M2
CARPARK - 6251.5M2
RAMP - 470.1M2
EXTERNALS - 3460M2
LANDSCAPE BATS 6499.6M2
MUGA - 2284.7M2
3G PITCH - 6099M2

# STAR ACADEMY EARTHWORKS MMP - 6F2 on-site stockpile relocated into the ramp and access road




Scale 1 : 400
C:\Users\Scott\Desktop\STAR FORMA REV US TS TO FORMA REV 8 8 24.see

TOTAL AREAS

PILEMAT - 5144M2
CARPARK - 6251.5M2
RAMP - 470.1M2
EXTERNALS - 3460M2
LANDSCAPE BATS 6499.6M2
MUGA - 2284.7M2
3G PITCH - 6099M2

# STAR ACADEMY EARTHWORKS MMP - 6F5 Volumes




Scale 1 : 400
C:\Users\Scott\Desktop\STAR FORMA REV US TS TO FORMA REV 8 8 24.see

TOTAL AREAS

PILEMAT - 5144M2
CARPARK - 6251.5M2
RAMP - 470.1M2
EXTERNALS - 3460M2
LANDSCAPE BATS 6499.6M2
MUGA - 2284.7M2
3G PITCH - 6099M2

# STAR ACADEMY EARTHWORKS MMP - 6F5 Volumes

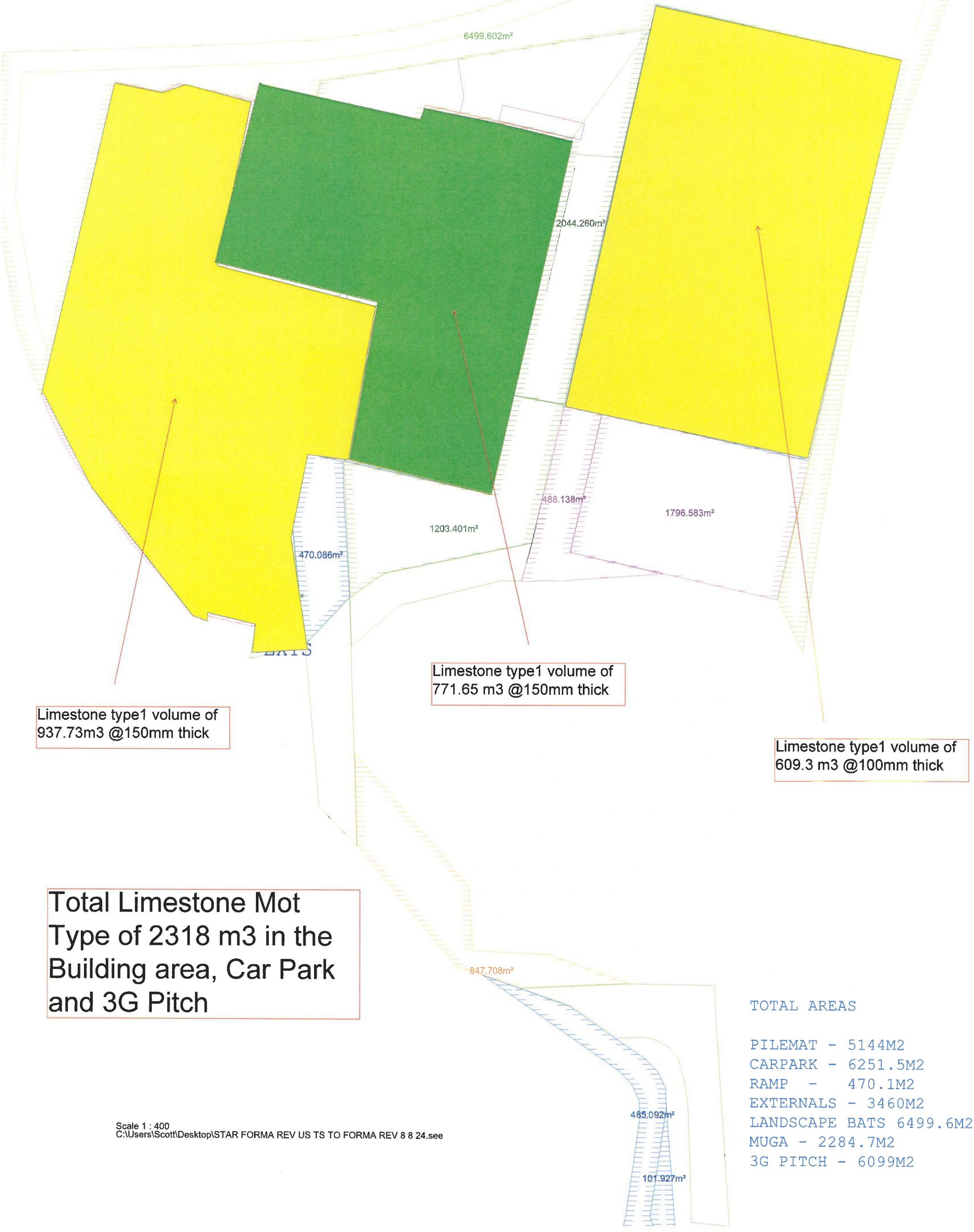



Scale 1 : 400
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TOTAL AREAS

PILEMAT - 5144M2
CARPARK - 6251.5M2
RAMP - 470.1M2
EXTERNALS - 3460M2
LANDSCAPE BATS 6499.6M2
MUGA - 2284.7M2
3G PITCH - 6099M2

# STAR ACADEMY EARTHWORKS MMP - Limestone Type 1 Volumes



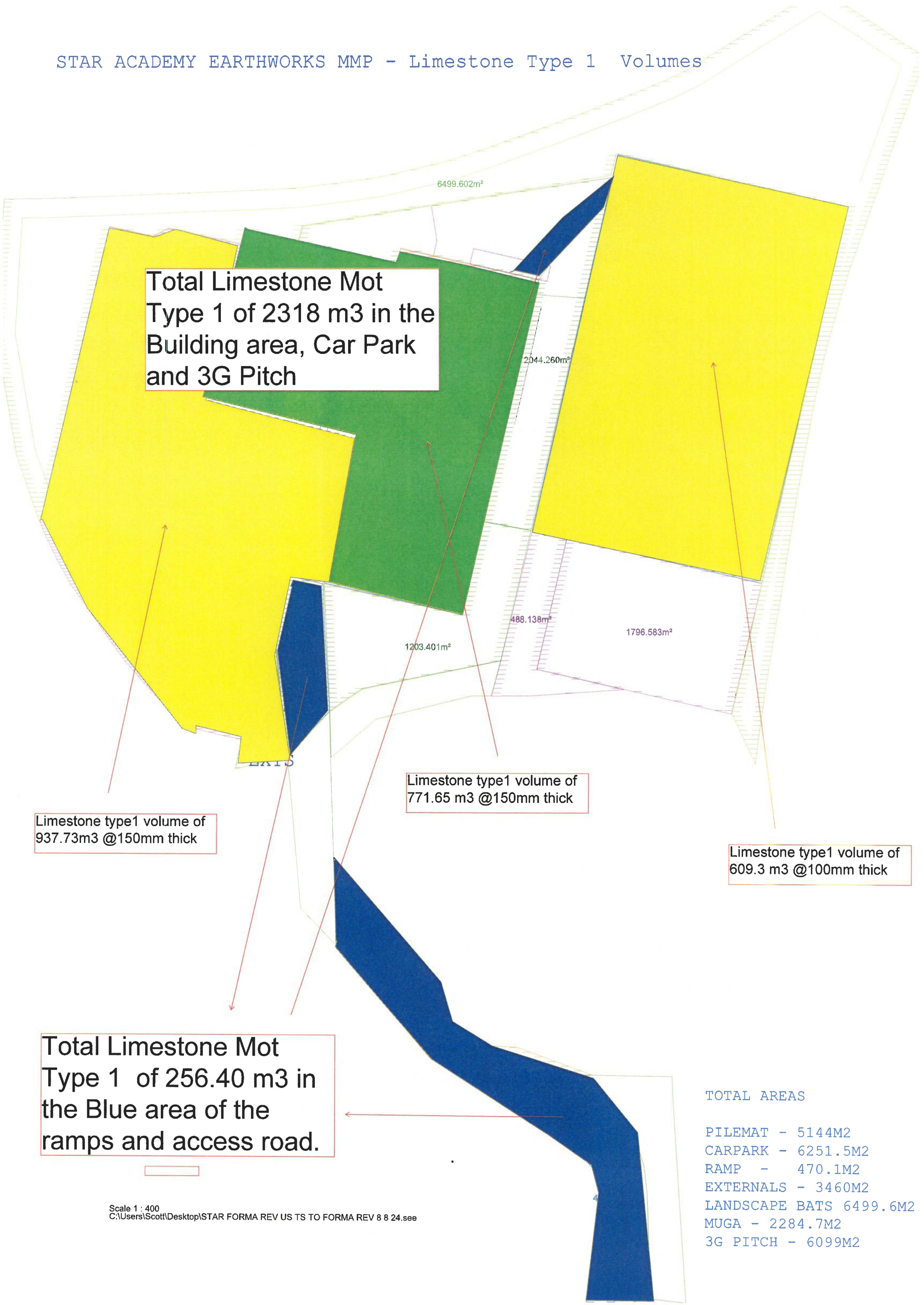

Total Limestone Mot Type of 2318 m3 in the Building area, Car Park and 3G Pitch

Scale 1 : 400
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TOTAL AREAS

PILEMAT - 5144M2
CARPARK - 6251.5M2
RAMP - 470.1M2
EXTERNALS - 3460M2
LANDSCAPE BATS 6499.6M2
MUGA - 2284.7M2
3G PITCH - 6099M2

# STAR ACADEMY EARTHWORKS MMP - Limestone Type 1 Volumes




Scale 1 : 400
C:\Users\Scott\Desktop\STAR FORMA REV US TS TO FORMA REV 8 8 24.see

TOTAL AREAS

PILEMAT - 5144M2
CARPARK - 6251.5M2
RAMP - 470.1M2
EXTERNALS - 3460M2
LANDSCAPE BATS 6499.6M2
MUGA - 2284.7M2
3G PITCH - 6099M2

# APPENDIX G

**Data Sheets**

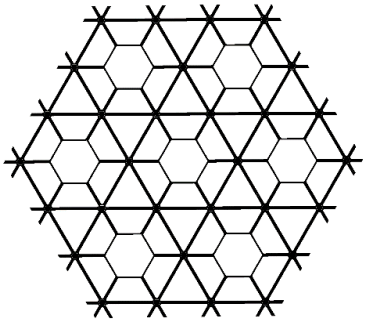
Tensar
A Division of CMC

# Product Data Sheet
# InterAx® NX850™ Geogrid

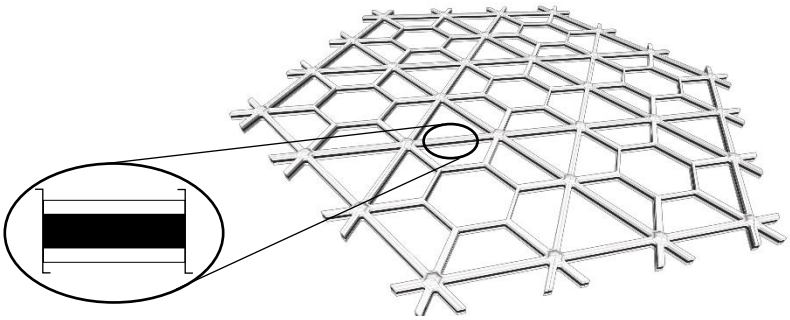
Tensar, a division of CMC, reserves the right to change its product specifications at any time. It is the responsibility of the person specifying the use of this product and of the purchaser to ensure that product specifications relied upon for design or procurement purposes are current and that the product is suitable for its intended use in each instance.

## General

1. The geogrid is manufactured from a coextruded, composite polymer sheet, which is then punched and oriented. The resulting structure consists of continuous and non-continuous ribs forming three aperture geometries (hexagon, trapezoid, and triangle) and an unimpeded suspended hexagon.



Tensar NX850 Geogrid
Plan View



Tensar NX850 Geogrid
Perspective View

2. The following properties are intended for product identification:

| Identification Properties[1] | General |
|---|---|
| ▪ Aperture shapes | Hexagonal, Trapezoidal, & Triangular |
| ▪ Structure | Coextruded & Integrally Formed |
| ▪ Rib shape | Rectangular |
| ▪ Continuous parallel rib pitch[(2)], mm (in) | 80 (3.2) |
| ▪ Rib aspect ratio[(3)] | > 1.0 |
| ▪ Node thickness[(2)], mm (in) | 4.5 (0.18) |
| ▪ Color identification | White / Black / White |

## Dimensions and Delivery

The geogrid shall be delivered to the jobsite in roll form with each roll individually identified. Rolls are shipped with nominal measurements.

## Notes

1. Unless indicated otherwise, values shown are minimum average roll values determined in accordance with ASTM D4759-02
2. Nominal dimensions
3. Ratio of the mid-rib depth to the mid-rib width

Tensar, a Division of CMC
2500 Northwinds Pkwy., Ste. 500
Alpharetta, Georgia 30009

Phone: 800-TENSAR-1
www.tensarcorp.com

This specification supersedes any and all prior specifications for the product designated above and is not applicable to any product shipped prior to March 1, 2021. Tensar and InterAx are trademarks of Tensar, a division of CMC or its affiliates in the US and many other countries. U.S. and foreign patents pending on this product and its method of manufacture and use. Final determination of the suitability of the above-mentioned information or product for the use contemplated, and its manner of use are the sole responsibility of the user. Tensar disclaims any and all express, implied or statutory warranties, including but not limited to, any warranty of merchantability or fitness for a particular purpose regarding this product or the Company's other products, technologies or services. The information contained herein does not constitute engineering advice. (07.22)

## WASP02106

## Heavy Duty Geotextile 6m x 100m Roll

**Description**

WASP Heavy Duty Geotextile is a non-woven thermally bonded double sided geotextile, manufactured from UV stabilised, high tenacity, virgin polypropylene fibres that have been mechanically entangled to rpovide high strength, high extensibility, high loft and excellent abrasion characteristics. The mechanical properties guarantee excellent resistance to installation damage, excellent hydraulic properties and outstanding long term performance.



## SPECIFICATION

| | |
|---|---|
| Thickness at 2kPa (EN ISO 9863-1) mm | 1.25 |
| Width m | 6.0 |
| Length m | 100 |
| Tensile Strength MD (EN ISO 10319) kN/m | 24 |
| Elongation at max load MD (EN ISO 10319) % | 65 |
| Puncture Resistance - CBR (EN ISO 12236) kN | 3-7 |

| | |
|---|---|
| Dynamic Puncture Resistance cone drop Ø hole (EN ISO 13433) mm | 15 |
| Water Flow (EN ISO 11058) l/m²/s | 60 |
| Density (EN ISO 9864) g/m² | 300 |
| Core Material | PP |

**HIGH TENACITY**

**SUPERB PROTECTION**

**HIGH PERMEABILITY**

For more information please contact 01254 589987 or email sales@selenvironmental.com

Disclaimer
This product specification is neither giving nor implying warranty for the use of this information for design and installation, as these are beyond our control. The data provided is typical and based upon the mean values and we reserve the right to change the specifications without prior notice.

# APPENDIX H

**Photographs**

**Appendix H**

## North

**William Smith House**
**173 – 183 Witton Street**
**Northwich**
**Cheshire**
**CW9 5LP**

**Tel: 01606 334 844**

## Midlands

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**Saxon Business Park**
**Stoke Prior**
**Bromsgrove**
**Worcestershire**
**B60 4AD**

**Tel: 01215 729 014**

## South

**Suite 8-9**
**Tapnage Farm**
**Titchfield Lane**
**Wickham**
**Hampshire**
**PO17 5PQ**

**Tel: 0800 044 8025**

**www.brownfield-solutions.com**