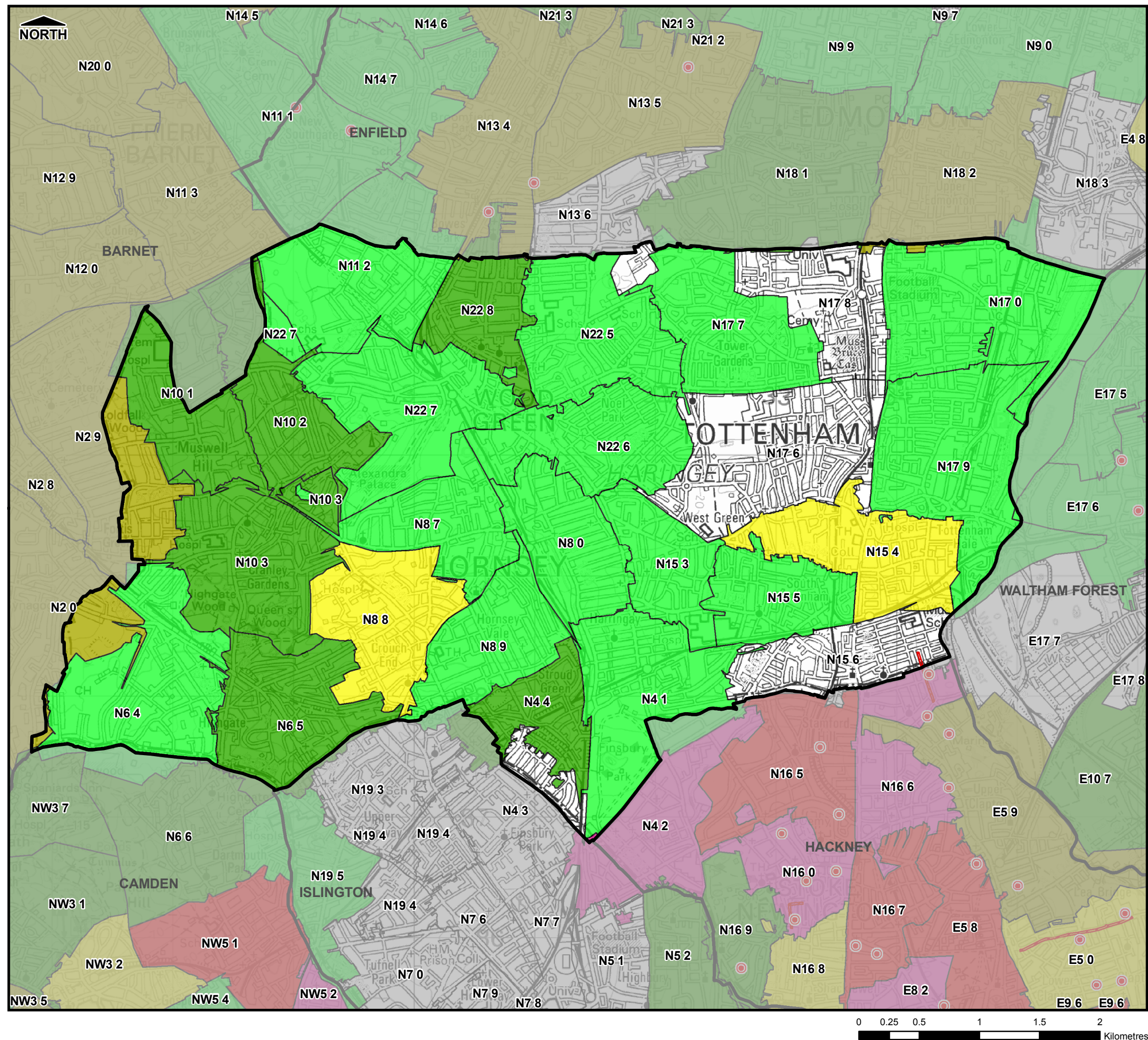


Filepath: L:\Environment\zwet\CS046913_DrainLondon_Tier2\Group\ARC\mxd\GP4_Haringey_Fig9_SewerIncidents.mxd



THIS DRAWING MAY BE USED ONLY FOR
THE PURPOSE INTENDED

Legend

- Borough Administrative Boundary
- Sewer Flooding Incidents
- Sewer Flood Outline
- No. of Sewer Flood Records
 - None
 - 1 - 5
 - 6 - 10
 - 11 - 20
 - 21 - 50
 - 51 - 100
 - 101+

Notes

- Sewer flood records relate to internal and external flooding of properties
- Data supplied by Thames Water Ltd and is correct as at June 2010

London Borough of Haringey



Surface Water Management Plan

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Scale at A3	Date	Drawn by	Approved by
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Recorded Incidents of Sewer Flooding

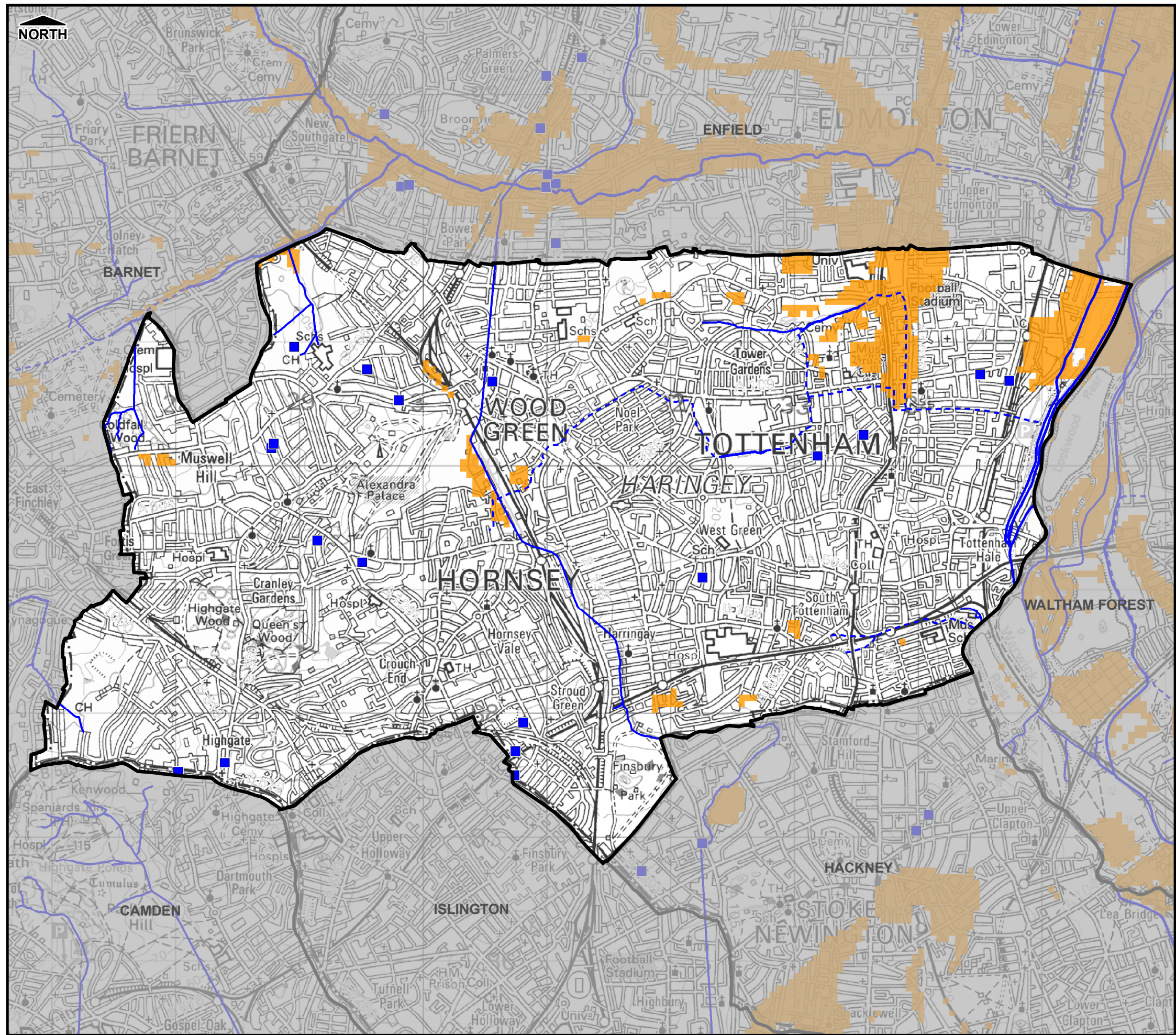
Consultants
CAPITA SYMONDS Capita Symonds
Flood Risk Management Level Seven,
52 Grosvenor Gardens,
Belgravia,
London
SW1W 0AU

Drain London Programme Board Members



FIGURE 9

Filepath: L:\Environment\zwet\CS046913_DrainLondon_Tier2\Group4\ARC\mxd\GP4_Haringey_Fig10_PotentialElevatedGWMap.mxd



THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED

Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- Groundwater Flood Incident (EA Records)
- Groundwater Flood Incident (Other Records)
- Increased Potential for Elevated Groundwater in:
 - Permeable Superficial Deposits
 - Consolidated Aquifers
- Culverted Watercourse (Main River)

Notes

- The increased Potential for Elevated Groundwater map shows those areas within the London Boroughs where there is an increased potential for groundwater to rise sufficiently to interact with the ground surface or be within 2 m of the ground surface. Such groundwater rise could lead to the following consequences:
 - flooding of basements of buildings below ground level;
 - flooding of buried services or other assets below ground level;
 - inundation of farmland, roads, commercial, residential and amenity areas;
 - flooding of ground floors of buildings above ground level; and
 - overflowing of sewers and drains.
- Incident records shown are generally unconfirmed and may include issues such as water main bursts or non-groundwater related problems.
- Areas not shown to have increased potential for elevated groundwater should be considered to have a low potential for elevated groundwater – Lack of information does not imply 'no potential' of elevated groundwater in that area.
- Includes groundwater flood mapping provided by JBA Consulting. Copyright © Jeremy Benn Associates Limited 2008 - 2011, partially derived from data supplied by the Environment Agency

London Borough of Haringey



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Scale at A3	Date	Drawn by	Approved by
1:32,000	07/04/2011	S.TURNBULL	S.IP

Increased Potential for Elevated Groundwater Map

Consultants

CAPITA SYMONDS

Flood Risk Management

Scot Wilson

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52 Grosvenor Gardens,
Belgravia,
London
SW1W 0AU

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FIGURE 10



Appendix F: Ground Movement Assessment



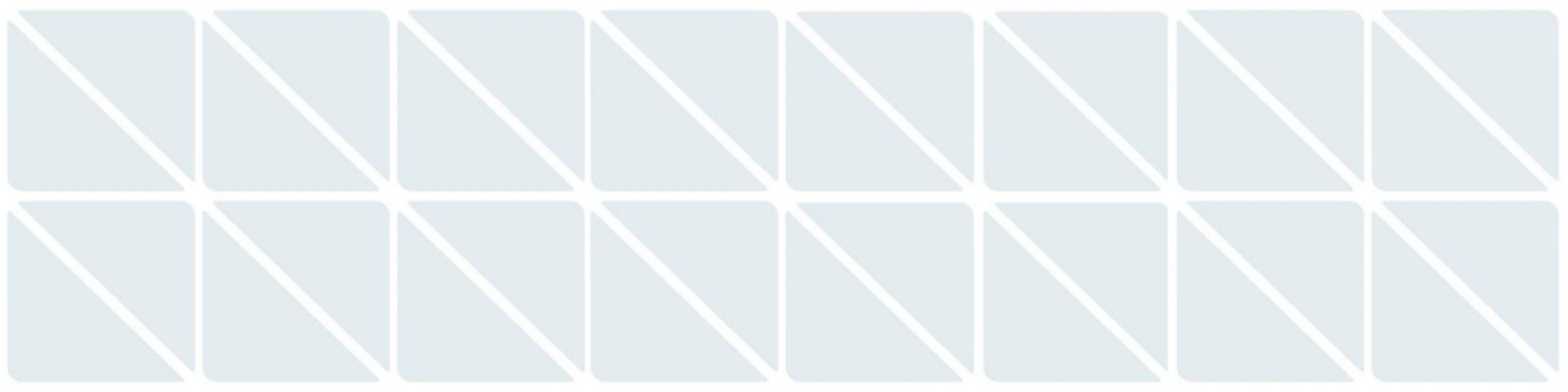
A-squared Studio

Highgate Mallinson Sports Centre

Buildings Ground Movement Assessment

October 2024

3244-A2S-XX-XX-RP-Y-0001-05





Project Name	Highgate Mallinson Sports Centre
Project Number	3244
Client	Highgate School
Document Name	Buildings Ground Movement Assessment

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Document Reference	Status	Notes	Revision	Issued by	Date
3244-A2S-XX-XX-RP-Y-0001-00	First Issue	-	00	AC	20/03/2024
3244-A2S-XX-XX-RP-Y-0001-01	Second Issue	Corrected project name	01	AC	02/04/2024
3244-A2S-XX-XX-RP-Y-0001-02	Third Issue	Updated following audit	02	AC	09/09/2024
3244-A2S-XX-XX-RP-Y-0001-03	Fourth Issue	Updated following audit	03	AC	10/09/2024
3244-A2S-XX-XX-RP-Y-0001-04	Fifth Issue	Changed wall toe to +99.0mOD	04	AC	04/10/2024
3244-A2S-XX-XX-RP-Y-0001-05	Sixth Issue	Scaled up excavation CIRIA curve	05	AC	09/10/2024



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Appendices

Appendix A: Façade Reference Notation

Appendix B: Loading Information

Appendix C: PDisp Inputs & Outputs

Appendix D: XDisp Inputs & Outputs



1. Introduction

A-squared Studio Engineers Limited (A-squared) has been engaged by Pringuer-James Consulting Engineers Limited (PJCE) on behalf of Highgate School to prepare a ground movement assessment (GMA) for the proposed development at Highgate Mallinson Sports Centre, Bishopswood Road, London, N6 4PB.

1.1. Study Aims and Objectives

A ground movement and impact assessment has been carried out in order to estimate the potential damage induced by the proposed redevelopment on the neighbouring properties.

The assessment encompasses properties located within the *zone of influence* of the proposed scheme. The GMA is based on *greenfield* ground movements and *unlikely to be exceeded* ground movements. The adopted assessment methodology provides a robust and conservative assessment representative of current industry best practice, as detailed in Section 4.

The assessment carried out and described herein aims to:

- Assess the impact on ground movements induced by the proposed works on adjacent properties.
- Inform Party Wall awards.
- Provide performance criteria and inform aspects of substructure construction and design.

This report provides a detailed description of the:

- Site and proposed development.
- Modelling parameters and input.
- Analyses and results.

1.2. Information Sources

The principal sources of information, which have informed the assessments presented herein, include the following:

- *Highgate School MSC 4Phase Landscape strategy report* produced by Robert Myers Associates, dated June 2022 (ref. 733.01(RP)0001).
- Loading plans prepared by PJCE, dated February 2024.
- Architectural drawings prepared by Ed Toovey Architects, dated May 2022.

Information available in the public domain:

- British Geological Survey online database (various sources).
- Google Earth.



2. The Site and Proposed Development

2.1. Development Site and Current Site Use

The development site is located at Highgate Mallinson Sports Centre, Bishopswood Road, London, N6 4PB. The approximate National Grid reference for the site is TQ 27797 87754 and the site footprint covers approximately 0.74 hectares. The approximate average ground surface elevation at the site is 109m above Ordnance Datum (mOD) and ground surface levels in the surrounding area generally fall toward the West.

The development site falls within the administrative boundaries of the London Borough of Haringey and currently includes a fives courts building, a pool hall block, squash courts and a sports hall. The area surrounding the site comprises other Highgate School buildings and residential properties. The existing sports hall building is founded on an RC ground-bearing raft system.



Approximate site boundary marked by red line.

Figure 2.1 Location of the proposed development



The proposed development comprises the demolition of the fives courts, squash courts, part of the pool building and areas of hardstanding, construction of a second sports hall in place of the old fives courts and squash courts, and construction of new fives courts adjacent to the existing sports hall. Demolition plans and proposed ground floor plans are presented in Figure 2.2 and Figure 2.3 respectively. The development will be carried out in five phases which are marked on the proposed ground floor plan in Figure 2.3.

Two basements are proposed as part of the development. The first is an approximately 4.0m-deep basement which will form the new fives court (Phase 2A), adjacent to the existing sports hall. The second will form the new sports hall to the North (Phase 2B), directly adjacent to the existing pool hall block and is approximately 3.7m-deep. Both excavations will be supported by contiguous piled walls with internal in-situ RC lining walls, except for the Southern edge of the new fives courts, which will be supported by in-situ RC retaining walls. Both basement areas are proposed to be supported by an RC ground-bearing raft system with tension piles to restrict uplift forces on the basement box in accidental groundwater conditions. A section drawing through the proposed basement is presented in Figure 2.4.

A 1.5m-deep flood storage basin will be constructed to the east of the site which is designed to receive surface water flowing overland from the upstream catchment area. A plan of the wider site showing the location of the sports pitch flood basin in relation to the site is presented in Figure 2.5.

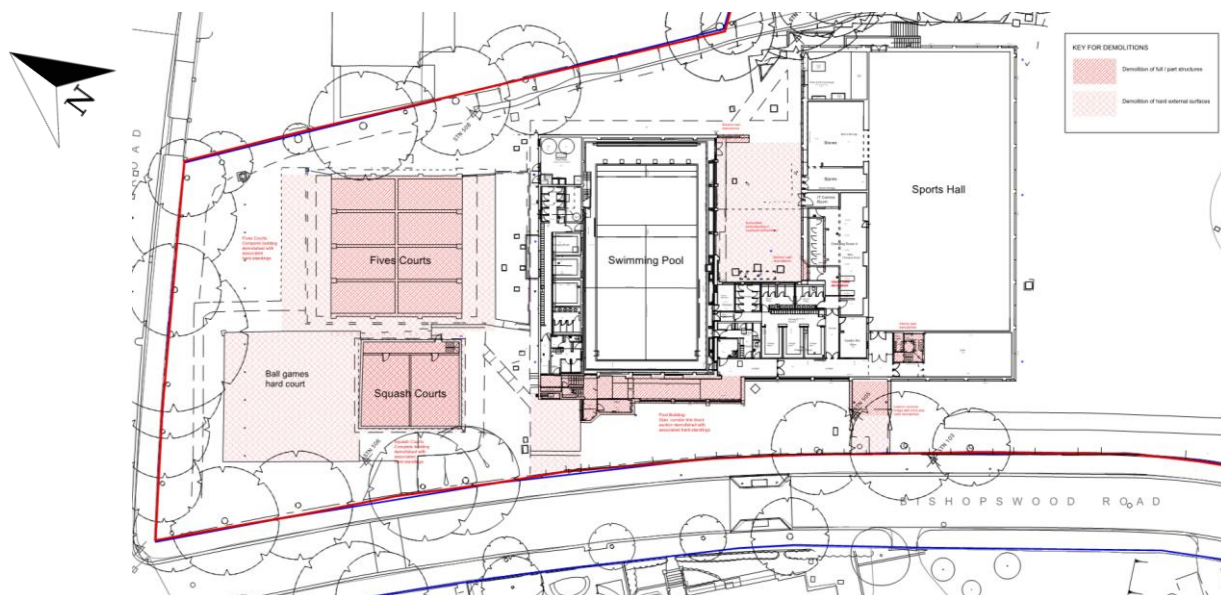


Figure 2.2 Demolition plan

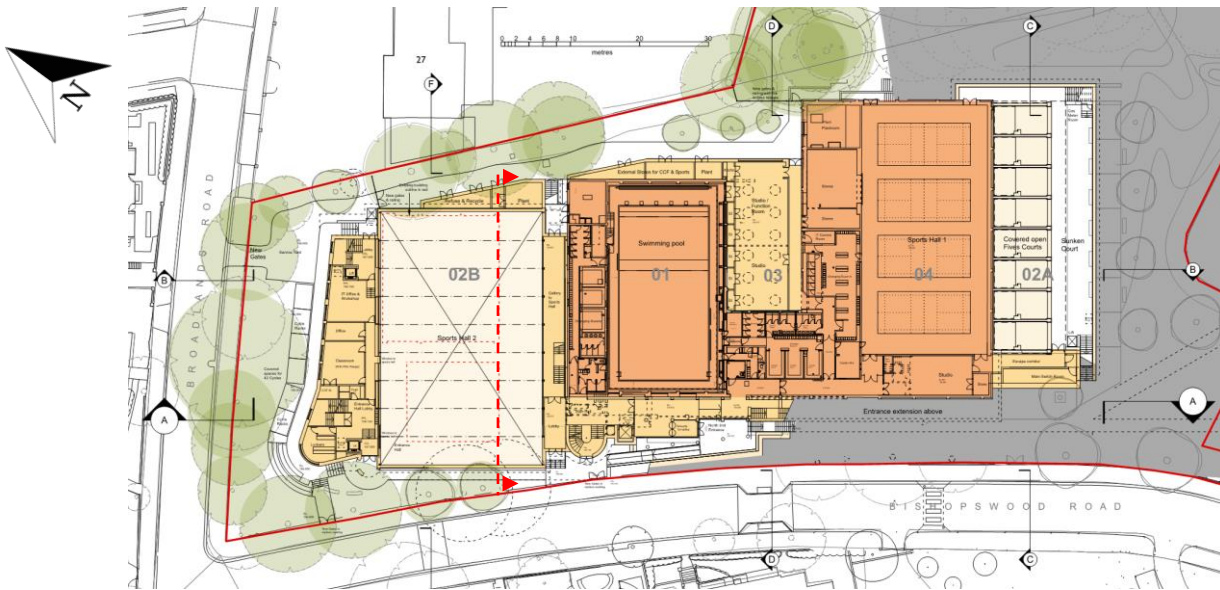
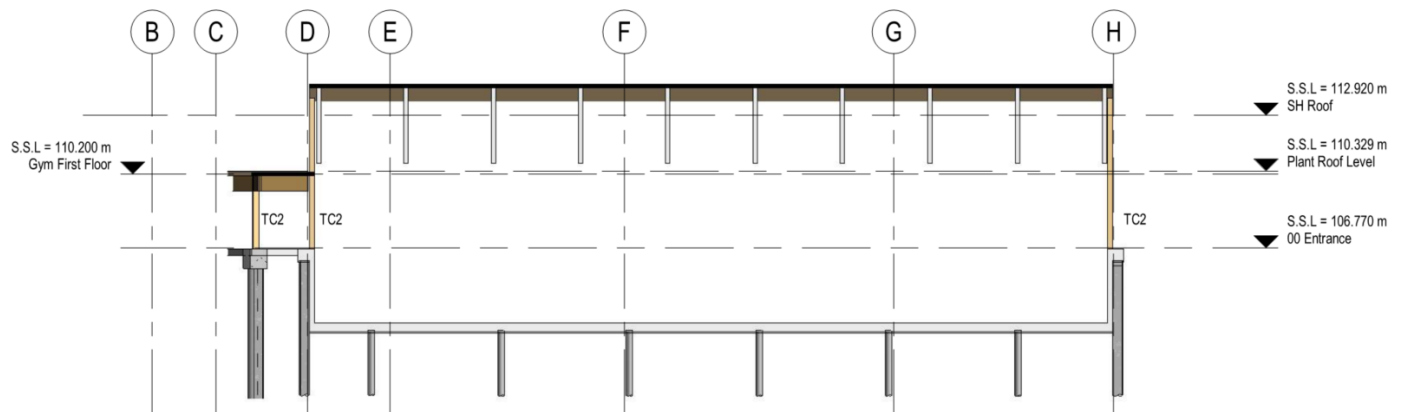


Figure 2.3 Proposed ground floor plan



Section location marked in red in Figure 2.3.

Figure 2.4 Proposed basement section drawing



Figure 2.5 Wider site plan



3. Geology

Site-specific ground investigation has been undertaken by Soil Consultants Ltd in four phases. An initial and supplementary phase were undertaken in February 2016 to investigate the ground conditions surrounding the school buildings, followed by a third phase to investigate the conditions of the flood storage basin area in February 2024. No groundwater monitoring was undertaken as part of these phases of GI, so another phase was undertaken which comprised additional boreholes near the school buildings and proposed flood storage basin, with groundwater monitoring included. The data from the investigation has been used to derive a ground model and geotechnical parameters for the site to inform the ground movement assessment. The ground conditions on site were found to comprise the following (in order of succession):

- Made Ground / topsoil
- Head Deposits
- Claygate Member
- London Clay Formation

The ground model and geotechnical parameters have been chosen specifically for the purpose of this GMA. The ground model is presented in Table 3.1.

Table 3.1 Ground model and geotechnical parameters adopted for the ground movement assessment

Stratum	Top of stratum (mOD)	Thickness (m)	Undrained Shear Strength c_u (kPa)	Undrained Young's Modulus, $E_u^{[3][5]}$ (MPa)	Drained Young's Modulus, $E'^{[4]}$ (MPa)
Made Ground	+106.8 ^[1]	0.3	-	-	V: 10.0 H: 10.0
Head Deposits	+106.5	2.1	32.0	V: 16.0 H: 25.6	V: 12.8 H: 20.48
Claygate Member	+104.4	5.1	$32.0 + 17.4z^{[6]}$	V: $16.0 + 8.7z^{[6]}$ H: $25.6 + 13.92z^{[6]}$	V: $12.8 + 6.9z^{[6]}$ H: $20.48 + 11.14z^{[6]}$
London Clay Formation	+99.3	Unproven	$120.0 + 8.2z^{[6]}$	V: $60.0 + 4.1z^{[6]}$ H: $120.0 + 8.2z^{[6]}$	V: $48.0 + 3.3z^{[6]}$ H: $96.0 + 6.56z^{[6]}$

1. The ground level adjacent to the proposed basement has been adopted as ground level in the GMA.
2. The ground model and geotechnical parameters have been derived solely for the purposes of this assessment.
3. Vertical undrained Young's Modulus has been derived using the relationship $E_u = 500c_u$.
4. Vertical and horizontal drained Young's Modulus has been derived using the relationship $E' = 0.8E_u$.
5. Horizontal undrained Young's Modulus for the Head Deposits and Claygate Member has been derived using the relationship $E_u = 800c_u$. Horizontal undrained Young's Modulus for the London Clay Formation has been derived using the relationship $E_u = 1000c_u$.
6. z refers to metres below top of stratum.
7. *Rigid boundary* assumed at approximately +34.11mOD for analytical purposes.
8. V: vertical, H: horizontal.



4. Impact Assessment Evaluation

4.1. Assessment Details

The assessment has been undertaken using proprietary spreadsheets and the commercially available software Oasys PDisp and XDisp, which consider the three-dimensional ground movement field induced by the proposed excavation works.

Ground movements will arise as a result of various mechanisms, which are mobilised as part of the construction works for the proposed scheme. The demolition of superstructure elements and excavation process will induce ground movements arising from the overburden removal. The transfer of the building loading to lower strata by the construction of the new superstructure will partially reinstate a portion of the removed overburden, yielding settlements across areas of the foundation system. The induced ground movements will extend over a given zone of influence surrounding the building/basement footprint.

A series of three-dimensional models of the proposed scheme have been developed in Oasys XDisp/PDisp software and combined by means of superposition in order to enable ground movement assessments to be carried out representing the various construction stages. The ground movement displacement fields were separated in two groups (A & B) based on the approach followed, as detailed below:

Group A – Unloading/Loading ground movements

- A1. Demolition and excavation (short-term).
- A2. Demolition, excavation and building loading (long-term).

Group B – CIRIA-based ground movements

- B1. Contiguous pile wall installation and excavation.
- B2. Contiguous pile wall installation, excavation and building loading (long-term).

The Group A assessments are based on *greenfield* ground movements evaluated from linear half space (PDisp) analyses and focus on vertical ground movements induced by the unloading/re-loading processes.

The proposed loading pressures have been determined from load take down information provided by PJCE (included in Appendix B) and have been applied as uniformly distributed unloading and loading pressures representative of the demolition, excavation, and building loading as shown in Figure 4.1 and Figure 4.2.

The sports hall excavation has been modelled as an unloading pressure of 75kPa, and the fives court excavation has been modelled as an unloading pressure of 80kPa, applied at the basement formation levels (equating to the removal of 3.7 and 4.0m of soil respectively). The demolition of the existing fives courts and squash courts have been conservatively modelled as an unloading pressure of 24kPa (approximately equal to the demolition of a two-storey building).

The excavation of the flood storage basin has been modelled as an unloading pressure of 30kPa, applied at the base of the excavation. The modelling of this feature has been simplified from its ovular shape to a rectangle, with a breadth and width equal to the maximum breadth and width of the ovular shape.

The Group B assessments adopt the normalised ground displacement curves reported in CIRIA C760 to assess the impact of retention system installation works and the excavation. The following CIRIA C760 normalised ground movement curves were adopted to assess ground movements due to retention system installation and excavation works:

- *Contiguous pile wall installation*: Installation of contiguous pile wall in stiff clay.
- *Sports hall excavation*: Excavation in front of a low stiffness wall in stiff clay.
- *Flood storage basin excavation*: Excavation in front of a low stiffness wall in stiff clay.



An allowance has been made for potential installation of walls or structures to the edges of the flood storage basin by utilising the Installation of planar diaphragm wall in stiff clay CIRIA curve.

A WALLAP analysis of the proposed excavation and retention system has been undertaken and the excavation CIRIA curves have been scaled up to impose the calculated WALLAP wall deflections in XDisp.

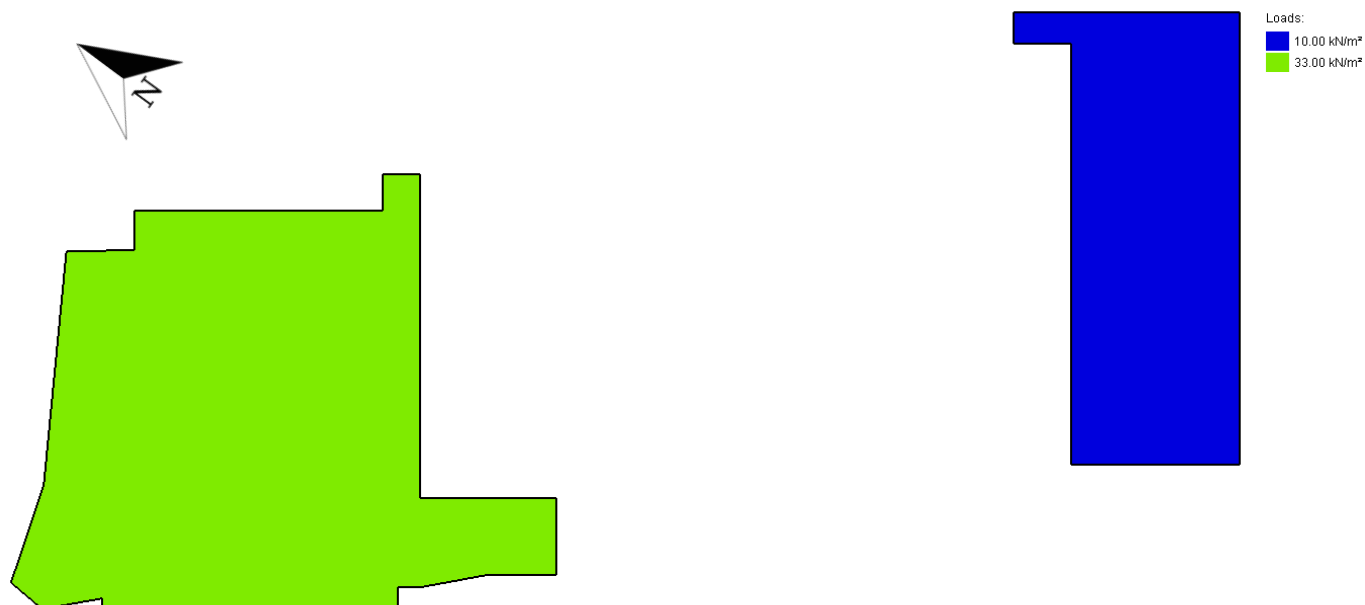


Figure 4.1 Building loading as modelled in PDisp

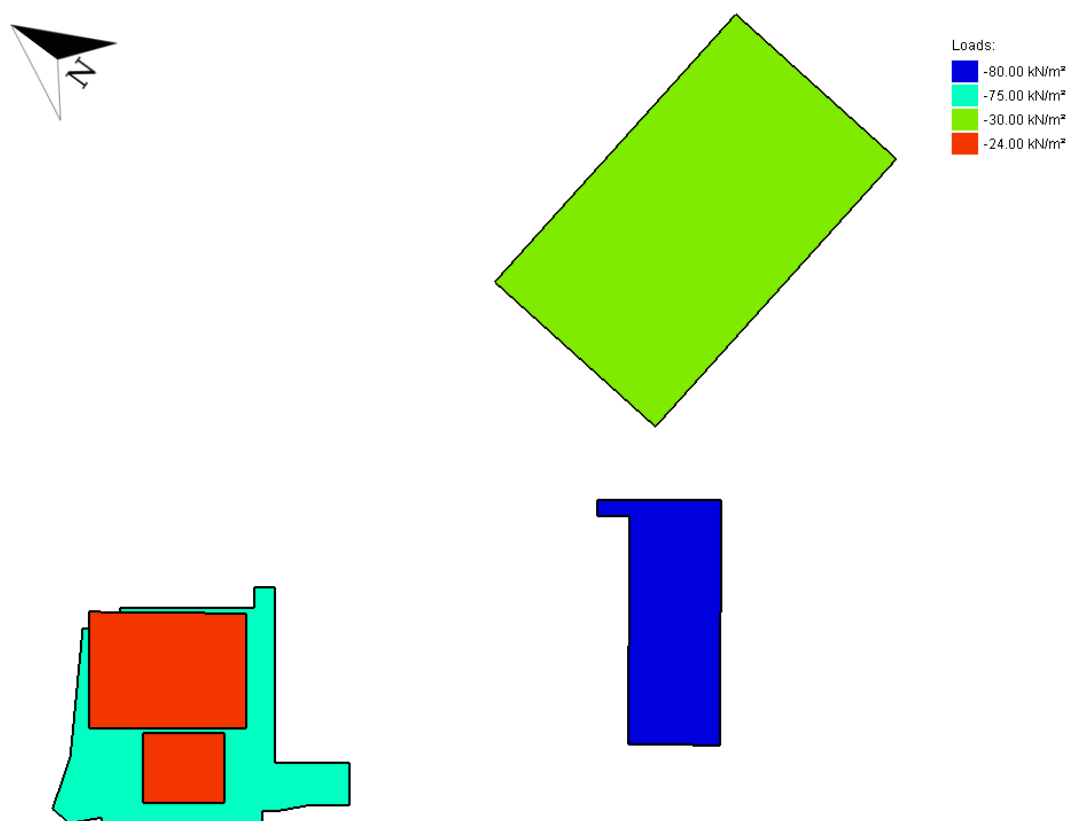


Figure 4.2 Unloading as modelled in PDisp



The two groups of analyses enabled the production of an envelope of damage classification results – with the worst-case results presented herein. A representative geometry has been adopted for defining the excavation/installation geometry implemented in the 3D modelling efforts. An indicative plot of the analytical model is presented below in Figure 4.3, showing the excavation area and the adjacent properties included in the damage assessment.

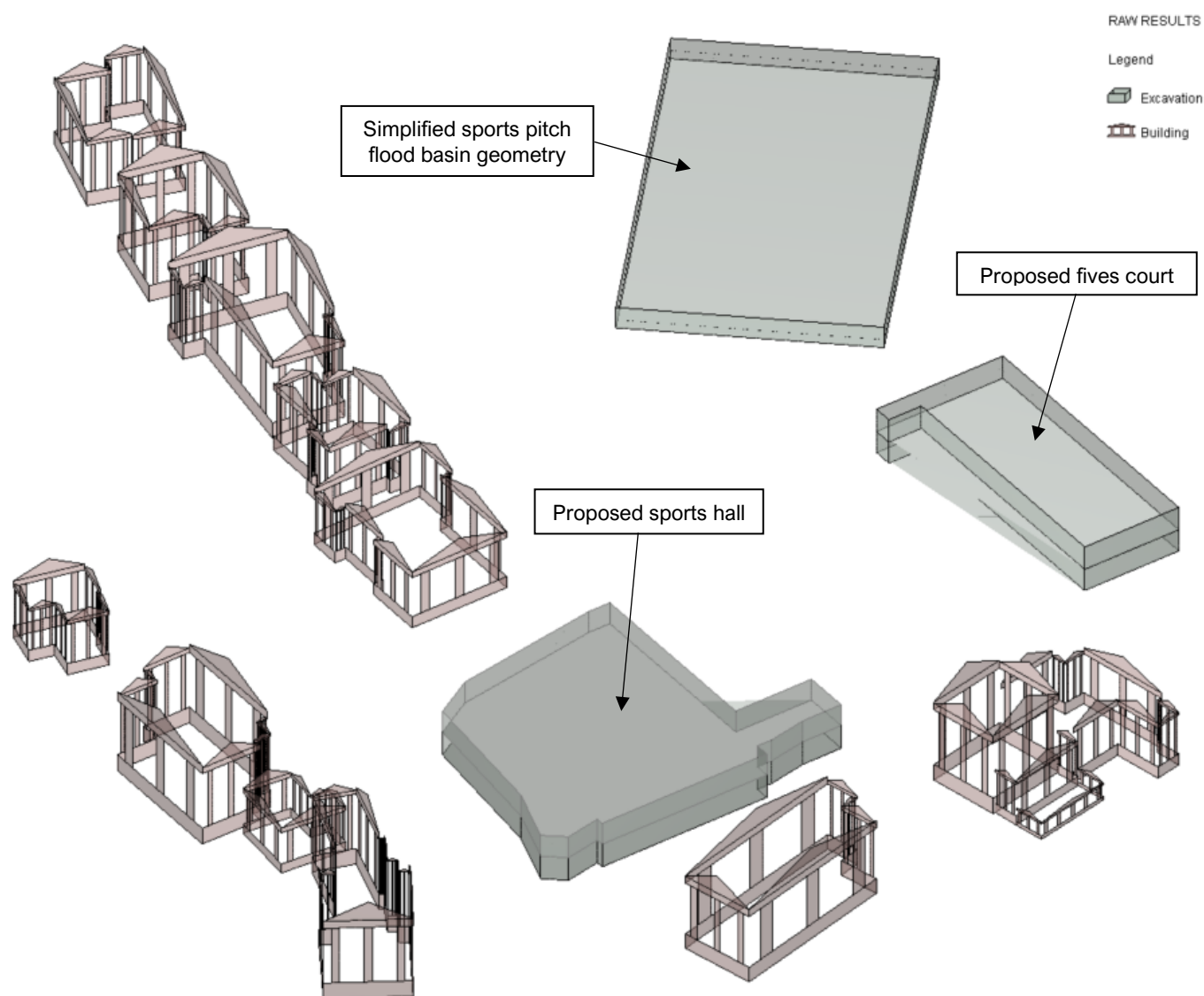


Figure 4.3 Indicative plot of three-dimensional analytical model in XDisp

4.2. Impact Assessment

4.2.1. General

The potential impact/damage induced on primary façade/wall elements of the buildings surrounding the proposed scheme have been evaluated on the basis of the calculated ground movement fields. The masonry walls of concern are shown in Appendix A, including the wall nomenclature/reference system adopted. The arrangement is based on the currently available survey information and presents an array of masonry façades running both perpendicular and parallel to the proposed basement (covering the key



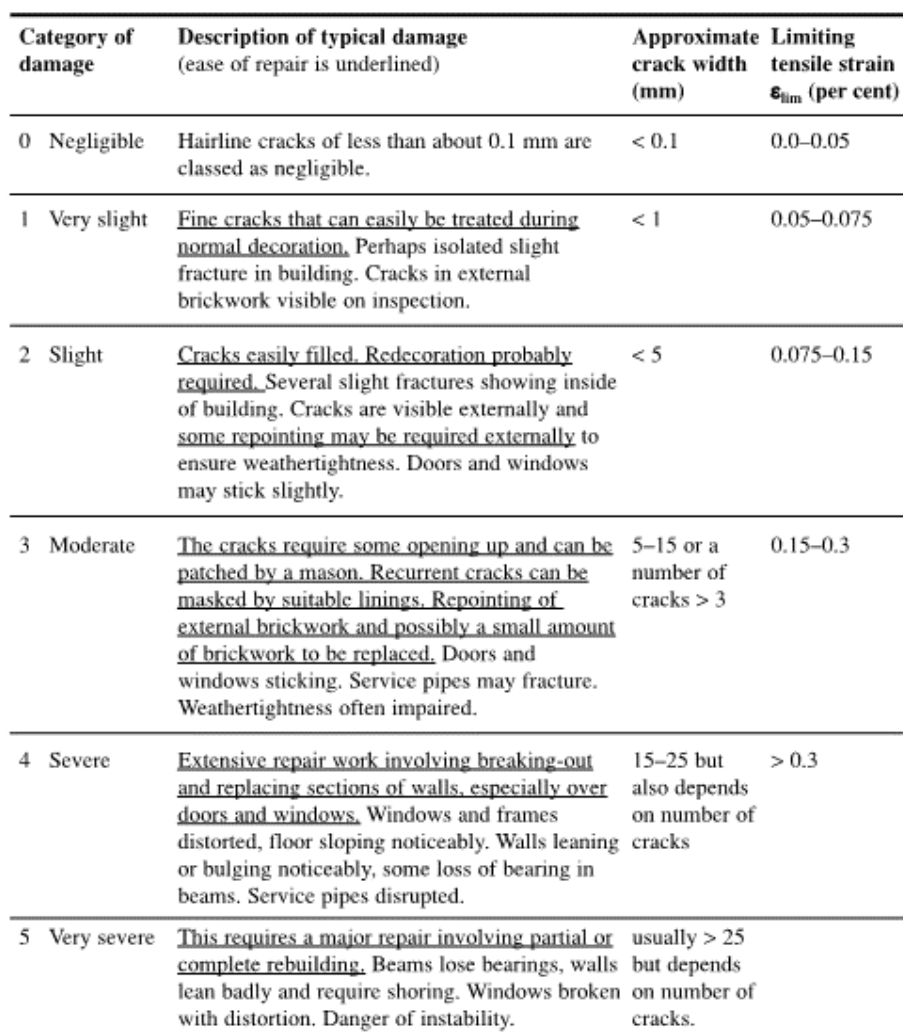
deformation mechanisms). The façades of the neighbouring buildings considered for the current study are grouped in the following manner:

- 19.BLR: 19 Broadlands Road
- 20c.BLR: 20c Broadlands Road
- 21.BLR: 21 Broadlands Road
- 22.BLR: 22 Broadlands Road
- 22a.BLR: 22a Broadlands Road
- 23.BLR: 23 Broadlands Road
- 24.BLR: 24 Broadlands Road
- 25.BLR: 25 Broadlands Road
- 27.BLR: 27 Broadlands Road
- FH: Field House
- PP.Sch: PrePrep School
- GH: Grindal House

Each wall has been assumed to behave as an equivalent beam subject to a bending and extension/compression deformation mechanism, based on the evaluated greenfield ground movement, as outlined previously.

Tensile strains induced within the building masonry walls have been evaluated based on the deflection ratios Δ/L and horizontal extension mechanisms estimated from the analyses. The assessment considers the well-established Burland (1997) damage classification method, as presented and summarised in Figure 4.4 and Figure 4.5. This method involves a relatively simple but robust means of assessment, which is widely adopted and is considered to comprise an industry standard/best practice basis for impact assessments of this typology.

Potential damage categories are directly related to the tensile strains induced by the proposed construction stages, arising from a combination of direct tension, and bending induced tension mechanisms. The evaluated damage categories correspond to an *unlikely to be exceeded* scenario (on the basis of the data sets adopted and greenfield assumptions).



The diagram shows a horizontal beam of length L_{AD} with points A, B, C, and D marked along its top edge. A triangular load is applied to the beam, represented by a dashed line below the beam. The load is zero at points A and D and reaches its maximum value at point B. The maximum deflection of the beam is labeled Δ_{max} .

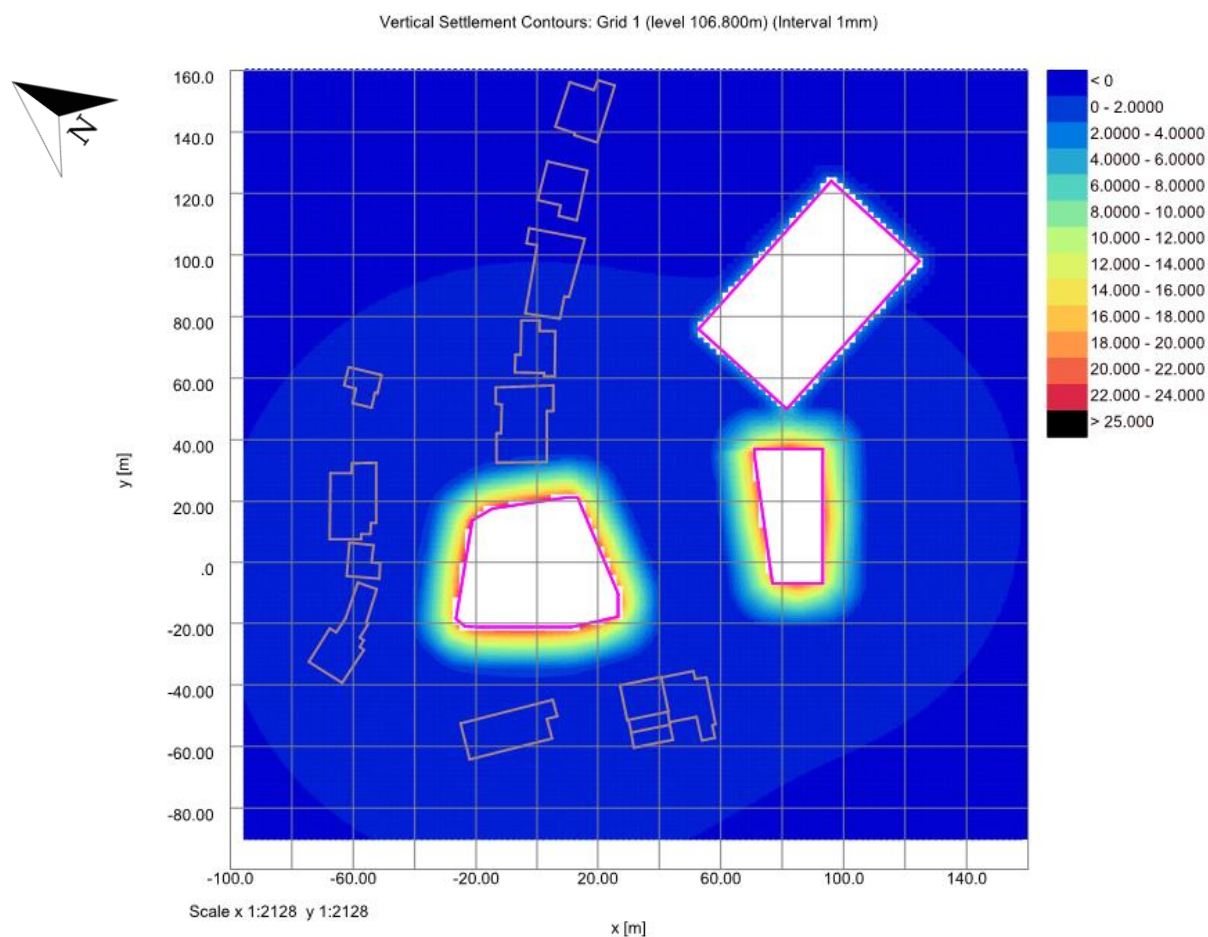
Highgate Mallinson Sports Centre - Buildings Ground Movement Assessment
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5. Ground Movement Assessment

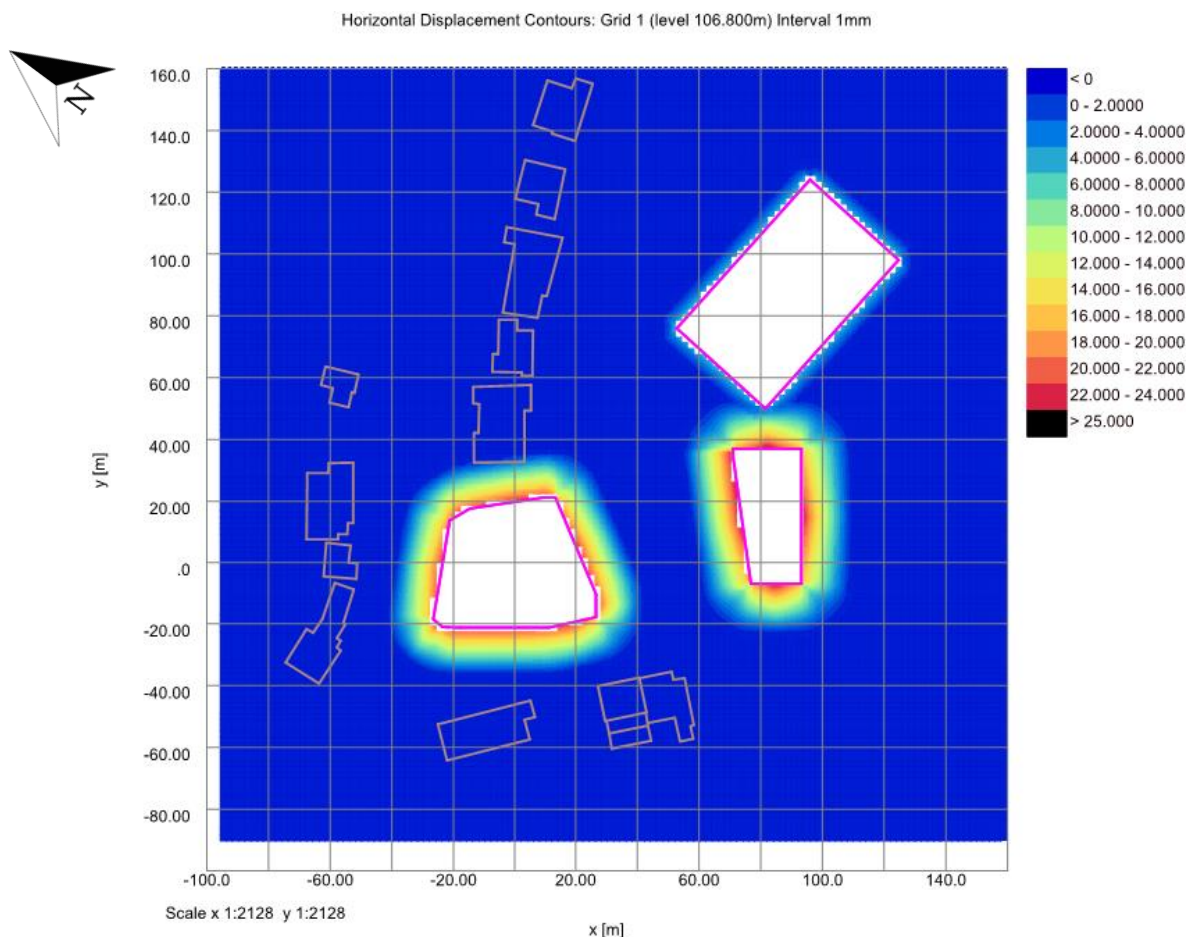
5.1. Façade Damage Categories

The results of the analysis indicate that the damage to all facades will be Category 0 (Negligible) or less, other than 27.BLR.4, which will be Category 1 (Very Slight) in scenarios B1 and B2. Figure 5.1 and Figure 5.2 depict the vertical and horizontal displacements, respectively, from analysis scenario B2 which represents the maximum ground movements.



Sports hall excavation has been simplified to avoid doubling up of CIRIA curves and to give a more accurate representation of ground movement.

Figure 5.1 Vertical settlement plot from scenario B2



Sports hall excavation has been simplified to avoid doubling up of CIRIA curves and to give a more accurate representation of ground movement.

Figure 5.2 Horizontal settlement plot from scenario B2

5.2. Impact on Adjacent Roads and Highways

An assessment of the impact that the proposed development will have on the adjacent roads has been carried out. The assessment included Broadlands Road and Bishopswood Road, with assessments taken at its closest position to the site boundary. The maximum displacements expected along the neighbouring highways is approximately 8mm vertically and 10mm horizontally.

5.3. Basement Excavation Criteria

The results of this analysis show that all buildings will fall within the damage classification Category 1: Very Slight if the ground movements caused by the wall installation, excavation and scheme construction are limited to the values presented in Table 5.1 for all walls.

It is noted that the GMA will be supplemented by a project-specific monitoring regime and Action Plan, which will delineate lines of responsibility, trigger levels in accordance with those presented in this GMA and appropriate mitigation measures.



Table 5.1 Cumulative limiting ground movement values at the top of the retention system at various construction stages

Stage	General wall deflection limits	
	Vertical	Horizontal
Contiguous pile wall installation	4.0	4.0
Excavation	23.0	25.0
Long-term	25.0	25.0



6. Conclusion

The interaction between the proposed Highgate Mallinson Sports Centre development and the neighbouring properties within the zone of influence of the scheme has been reviewed as part of the GMA study presented herein.

The impact of the various stages of construction have been reviewed on the basis of two alternative methods: evaluating the effects of unloading/overburden removal using PDisp; and simulating the excavation induced ground movements using empirical CIRIA curves in XDisp. In the latter case, a retaining wall solution (during the temporary works stage) has been considered, utilising the CIRIA C760 ground movement curves for low stiffness walls in stiff clay.

These two different scenarios have been considered in order to bind the potential ground movements arising from excavation operations and building loading (capturing the maximum potential heave, settlement, and lateral movement). This strategy ensures a robust evaluation of potential impact in light of the bespoke, intricate, and workmanship-dependent basement construction methodology. Both short-term (undrained) and long-term (drained) conditions have been assessed by adopting the relevant soil stiffness parameters for each case.

The results from the GMA analyses are presented in Section 5.1 (denoting the evaluated damage categorisation in accordance with the Burland criteria described herein). It is observed that the maximum potential damage classification for the neighbouring properties is Category 1 – Very Slight. The deflections predicted by the GMA should be considered to be the maximum acceptable in order to ensure the Very Slight damage category.

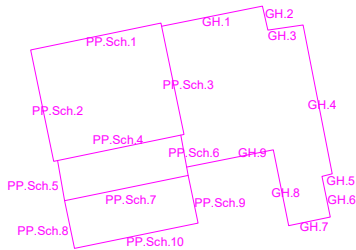
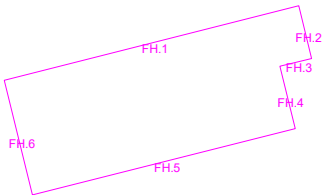
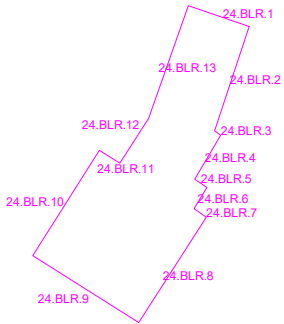
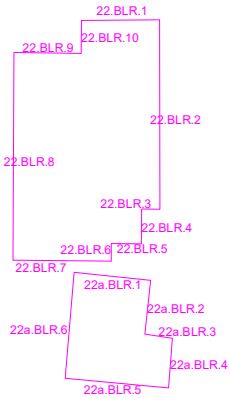
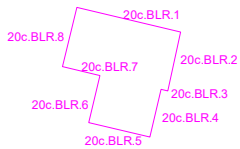
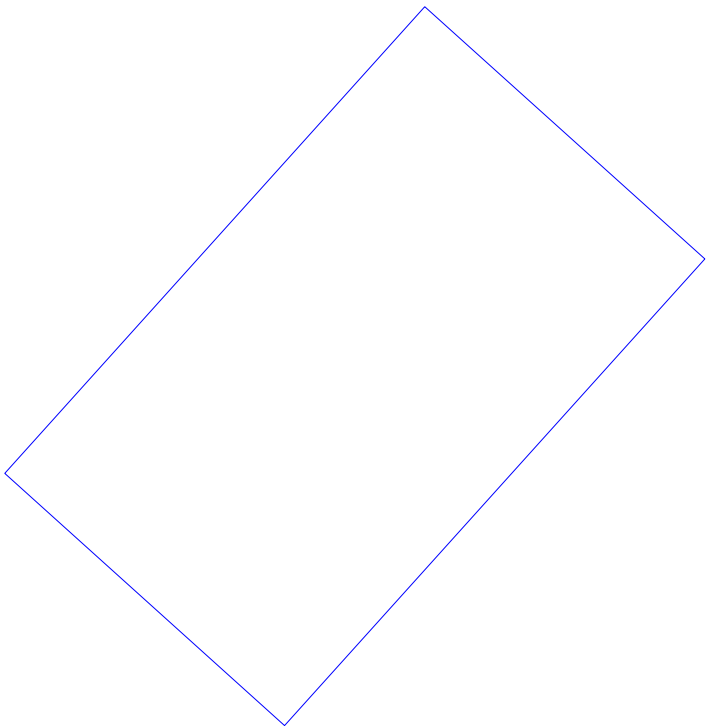
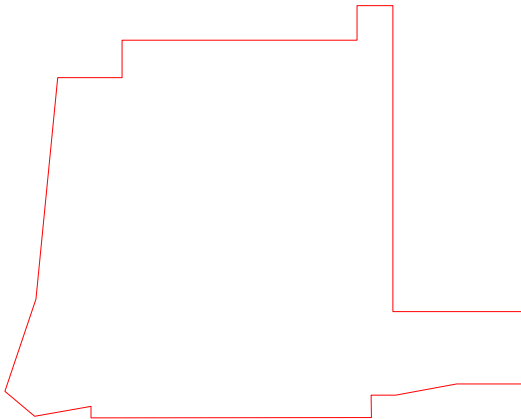
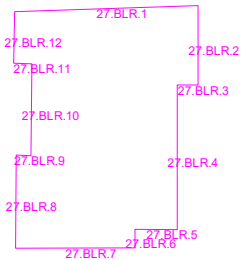
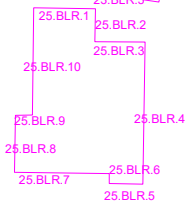
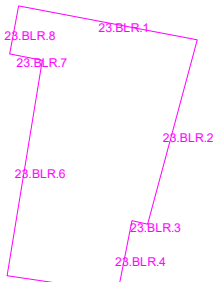
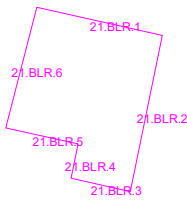
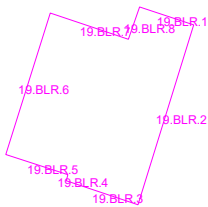
It is noted that the predicted ground movements, the associated wall tensile strains, and the level of damage categorisation are considered to be moderately conservative in view of the relatively cautious data selection and *greenfield* nature of the assessment undertaken.

It is noted that the GMA will be supplemented by a project-specific monitoring regime and Action Plan, which will delineate lines of responsibility, trigger levels in accordance with those presented in this GMA and appropriate mitigation measures. The assessment presented herein is dependent and reliant on the works being undertaken by an experienced contractor, high quality workmanship and appropriate supervision of construction means and methods by experienced personnel.

It is recommended that this report is reviewed and understood in full by the project team and major stakeholders. Where significant changes are made to items such as the construction sequencing, temporary propping arrangements and scheme design, the engineer should thoroughly review the discrepancy and evaluate any potential impacts on ground movement and building damage. If necessary, the building damage categories should be re-evaluated.

It is critical that the permanent and temporary works designs are carried out in a coordinated manner between performance specified elements and substructure contractors, with the aim to ensure that such design elements are in alignment with the assumptions / findings of the GMA and overall design intent.

Appendix A: Façade Reference Notation



Appendix B: Loading Information



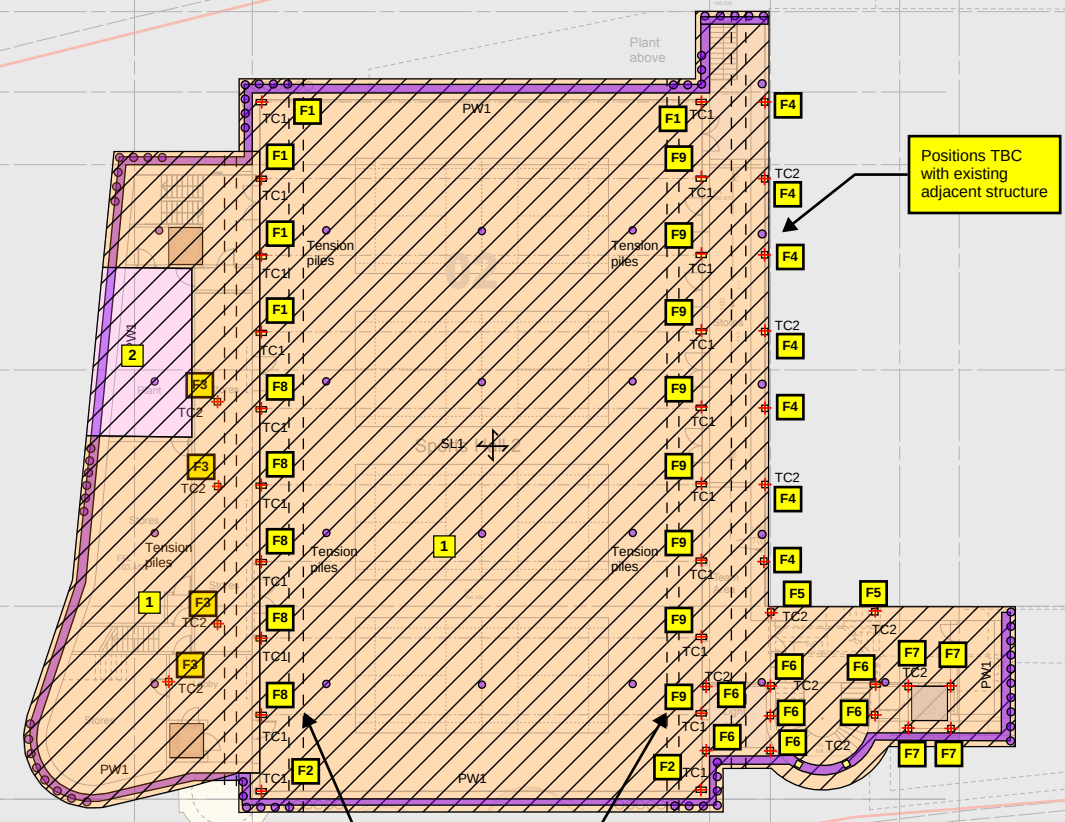
Key

1

SDL = 5.0 kN/m²
Partitions = 1.2 kN/m²
LL = 5.0 kN/m²

2

SDL = 1.5 kN/m²
Partitions = 1.2 kN/m²
LL = 7.5 kN/m² E213 Plant Rooms



Loads	Permanent	Variable
	kN	kN
F1 Load	300	250
F2 Load	200	100
F3 Load	375	250
F4 Load	125	75
F5 Load	200	175
F6 Load	250	250
F7 Load	125	75
F8 Load	175	175
F9 Load	225	200

All loads unfactored and rounded up.

Based on preliminary loading allowances as per PJCE Stage 2 report.

Basement plan Level 0

Thickening

All piles shown nominally. Number, spacing & diameter all subject to change following structural / geotechnical design.

Tension piles nominally 300mm diameter. Subject to geotechnical design.

ISSUE 09/03/2022

NOT FOR CONSTRUCTION

PJCE

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pjce.com

L2384-S-08-SK029

HIGHGATE SCHOOL,
SPORTS HALL

BASEMENT LOADING PLAN

STATUS: INFORMATION

DATE: 2024.02.19 REV: -

Reference Document

Highgate School MSC 4-Phase Scheme

Basement Plan Level 1 proposed

January 2022

Drwg No. 1182 / GA / 010 -

Scale 1:200 @ A1 / 1:400 @ A3

edtooveyarchitects

studio 401 royle building
31 wenlock road
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Appendix C: PDisp Inputs & Outputs

Oasys

Highgate Junior School Sports Hall
Unloading and Loading Long Term

Job No.

Sheet No.

Rev.

3244

Drg. Ref.

Made by
AC

Date

Checked

Titles

Job No.: 3244
Job Title: Highgate Junior School Sports Hall
Sub-title: Unloading and Loading Long Term
Calculation Heading:
Initials: AC
Checker:
Date Saved:
Date Checked:
Notes:
File Name: 3244 Unloading + Loading Long Term 02.pdd
File Path: C:\Users\Alex Corrigan\A-squared Dropbox\A2 matrix\A2-projects-3001-4000\3244 - Highgate Mallison Sports Centre\03 - Calculations\01 Buildings GMA\PDisp

History

Date	Time	By	Notes
05-Mar-2024	16:59	matri	New
05-Mar-2024	17:53	matri	
05-Mar-2024	19:10	matri	
05-Mar-2024	22:40	matri	
14-Mar-2024	15:40	matri	
02-Sep-2024	13:25	Ana Carvalho	
02-Sep-2024	14:00	Ana Carvalho	
02-Sep-2024	14:40	Ana Carvalho	
04-Sep-2024	12:11	Ana Carvalho	
19-Sep-2024	16:17	Ana Carvalho	
20-Sep-2024	18:01	Ana Carvalho	Open

Analysis Options

General

Global Poisson's ratio: 0.20
Maximum allowable ratio between values of E: 1.5
Horizontal rigid boundary level: 34.11 [m OD]
Displacements at load centroids: Yes
GSA piled raft data : No

Elastic

Elastic : Yes

Consolidation

Consolidation : No

Soil ProfilesUndrained

Layer ref.	Name	Level at top	Number of intermediate displacement levels	Youngs Modulus : Top	Youngs Modulus : Btm.	Poissons ratio	Non-linear curve
		[mOD]		[kN/m²]	[kN/m²]		
1	Made Ground	106.80	5	10000.	10000.	0.20000	None
2	Head Deposits	106.50	5	16000.	16000.	0.50000	None
3	Claygate Member	104.40	11	16000.	60000.	0.50000	None
4	London Clay	99.300	131	60000.	327280.	0.50000	None

Soil ProfilesDrained

Layer ref.	Name	Level at top	Number of intermediate displacement levels	Youngs Modulus : Top	Youngs Modulus : Btm.	Poissons ratio	Non-linear curve
		[mOD]		[kN/m²]	[kN/m²]		
1	Made Ground	106.80	5	10000.	10000.	0.20000	None
2	Head Deposits	106.50	5	12800.	12800.	0.20000	None
3	Claygate Member	104.40	11	12800.	48000.	0.20000	None
4	London Clay	99.300	131	48000.	263130.	0.20000	None

Non-linear Curve Coordinates - Non-linear Curve 1

Point	Strain [%]	Factor
-------	------------	--------

Soil Zones

Zone	Name	X min [m]	X max [m]	Y min [m]	Y max [m]	Profile
1	Soil Zone	-95.500	181.83	-90.140	170.45	Drained

Polygonal Load Data

Load ref.	Name	Position : Level	Position : Polygon : Coords. : Rect. tolerance [%]	No. of Rectangles	Value : Normal (local z) [kN/m²]
1	Excavation	103.05000	(-21.2,13.8) (-23.4,-8.98) (-26.6,-18.5) (-23.5,-21.1) (-17.7,-20) (-17.7,-21.2) (11.1,-21.2) (11.1,-18.9) (13.6,-18.9) (19.9,-17.7) (26.6,-17.7) (26.6,-10.3) (13.3,-10.3) (13.3,21.2) (9.64,21.2) (9.63,17.6) (-14.5,17.6) (-14.5,13.8)	10.000	14 -75.000
2	Ampitheatre Excavation	105.30000	(52.7,75.9) (95.9,124) (125.98) (81.5,50)	10.000	1 -30.000
3	Fives Court Demolition	106.80000	(-20.1,16.9) (8.21,16.6) (8.21,-3.98) (-20.1,-3.98)	10.000	1 -24.000
4	Squash Court Demolition	106.80000	(-10.4,-17.4) (4.21,-17.4) (4.16,-4.93) (-10.5,-4.89)	10.000	1 -24.000
5	Building Loading	103.05000	(-21.2,13.8) (-23.4,-8.98) (-26.6,-18.5) (-23.5,-21.1) (-17.7,-20) (-17.7,-21.2) (11.1,-21.2) (11.1,-18.9) (13.6,-18.9) (19.9,-17.7) (26.6,-17.7) (26.6,-10.3) (13.3,-10.3) (13.3,21.2) (9.64,21.2) (9.63,17.6) (-14.5,17.6) (-14.5,13.8)	10.000	14 33.000
6	Fives Court Excavation	102.80000	(71.1,37) (93.1,37) (93.1,-7.01) (76.7,-7) (76.7,33.9) (71,33.9) (71.1,37)	10.000	2 -80.000
7	Fives Court Loading	102.80000	(71.1,37) (93.1,37) (93.1,-7.01) (76.7,-7) (76.7,33.9) (71,33.9)	10.000	2 10.000

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C:\Users\Alex Corrigan\A-squared Dropbo...3244 Unloading + Loading Long Term 02.pdd

Page 1

Printed 20-Sep-2024

Time 18:42

Load ref.	Name	Position : Level	Position : Polygon	Polygon : Coords.	Position : Polygon Rectangles : Rect. tolerance	No. of Rectangles	Value : Normal (local z)	
1			(71.1,37)					
Polygonal Loads' Rectangles								
No.	Centre : x	Centre : y	Angle of local x from global X [Degrees]	Width [m]	x	Depth [m]	y	
Load 1 : Excavation (Edge 11 optimal)								
1	-23.29177	-20.94600	90.000	0.20800	0.70154			
2	-22.83531	-20.73800	90.000	0.20800	2.1046			
3	-22.37886	-20.53000	90.000	0.20800	3.5077			
4	-21.92240	-20.32200	90.000	0.20800	4.9108			
5	-21.46594	-20.11400	90.000	0.20800	6.3139			
6	-3.30889	-20.59500	90.000	1.1700	28.813			
7	-7.16229	-19.44000	90.000	1.1400	36.510			
8	-5.81869	-18.67000	90.000	0.40000	41.011			
9	-4.31099	-18.09500	90.000	0.75000	44.246			
10	0.75212	-13.99500	90.000	7.4300	51.616			
11	-5.13925	-9.63000	90.000	1.3000	36.898			
12	-4.47750	2.40000	90.000	22.760	35.575			
13	-0.61000	15.71000	90.000	3.8400	27.840			
14	11.47249	19.41000	90.000	3.5600	3.6750			
Load 2 : Amphitheatre Excavation (Edge 2 optimal)								
1	88.66000	86.94500	48.002	64.548	38.739			
Load 3 : Fives Court Demolition (Edge 2 optimal)								
1	-5.94500	6.36250	0.0	28.310	20.685			
Load 4 : Squash Court Demolition (Edge 1 optimal)								
1	-3.12002	-11.14004	0.078434	14.577	12.460			
Load 5 : Building Loading (Edge 11 optimal)								
1	-23.29177	-20.94600	90.000	0.20800	0.70154			
2	-22.83531	-20.73800	90.000	0.20800	2.1046			
3	-22.37886	-20.53000	90.000	0.20800	3.5077			
4	-21.92240	-20.32200	90.000	0.20800	4.9108			
5	-21.46594	-20.11400	90.000	0.20800	6.3139			
6	-3.30889	-20.59500	90.000	1.1700	28.813			
7	-7.16229	-19.44000	90.000	1.1400	36.510			
8	-5.81869	-18.67000	90.000	0.40000	41.011			
9	-4.31099	-18.09500	90.000	0.75000	44.246			
10	0.75212	-13.99500	90.000	7.4300	51.616			
11	-5.13925	-9.63000	90.000	1.3000	36.898			
12	-4.47750	2.40000	90.000	22.760	35.575			
13	-0.61000	15.71000	90.000	3.8400	27.840			
14	11.47249	19.41000	90.000	3.5600	3.6750			
Load 6 : Fives Court Excavation (Edge 7 optimal)								
1	82.09733	35.43097	-90.098	3.0603	22.085			
2	84.91483	13.45003	-90.098	40.892	16.440			
Load 7 : Fives Court Loading (Edge 7 optimal)								
1	82.09733	35.43097	-90.098	3.0603	22.085			
2	84.91483	13.45003	-90.098	40.892	16.440			
Displacement Lines								
Name	X1	Y1	Z1	X2	Y2	Z2	Intervals Calculate	Detailed Results
	[m]	[m]	[m]	[m]	[m]	[m]	[No.]	
20c.BLR.1	-61.43000	63.57000	106.80000	-50.74000	61.03000	106.80000	22 Yes	Yes
20c.BLR.2	-50.74000	61.03000	106.80000	-52.09000	54.99000	106.80000	13 Yes	Yes
20c.BLR.3	-52.09000	54.99000	106.80000	-52.78000	55.16000	106.80000	2 Yes	Yes
20c.BLR.4	-52.78000	55.16000	106.80000	-53.92000	50.25000	106.80000	11 Yes	Yes
20c.BLR.5	-53.92000	50.25000	106.80000	-60.19000	51.73000	106.80000	13 Yes	Yes
20c.BLR.6	-60.19000	51.73000	106.80000	-59.05000	56.56000	106.80000	10 Yes	Yes
20c.BLR.7	-59.05000	56.56000	106.80000	-62.89000	57.48000	106.80000	8 Yes	Yes
20c.BLR.8	-62.89000	57.48000	106.80000	-61.43000	63.57000	106.80000	13 Yes	Yes
22.BLR.1	-60.43000	32.30000	106.80000	-52.42000	32.38000	106.80000	17 Yes	Yes
22.BLR.2	-52.42000	32.38000	106.80000	-52.38000	12.91000	106.80000	39 Yes	Yes
22.BLR.3	-52.38000	12.91000	106.80000	-54.26000	12.93000	106.80000	4 Yes	Yes
22.BLR.4	-54.26000	12.93000	106.80000	-54.27000	9.35000	106.80000	8 Yes	Yes
22.BLR.5	-54.27000	9.35000	106.80000	-57.37000	9.36000	106.80000	7 Yes	Yes
22.BLR.6	-57.37000	9.36000	106.80000	-57.38000	7.57000	106.80000	4 Yes	Yes
22.BLR.7	-57.38000	7.57000	106.80000	-67.46000	7.66000	106.80000	21 Yes	Yes
22.BLR.8	-67.46000	7.66000	106.80000	-67.38000	29.02000	106.80000	43 Yes	Yes
22.BLR.9	-67.38000	29.02000	106.80000	-60.46000	28.94000	106.80000	14 Yes	Yes
22.BLR.10	-60.46000	28.94000	106.80000	-60.43000	32.30000	106.80000	7 Yes	Yes
22a.BLR.1	-61.21000	6.41000	106.80000	-53.34000	5.58000	106.80000	16 Yes	Yes
22a.BLR.2	-53.34000	5.58000	106.80000	-53.91000	0.05000	106.80000	12 Yes	Yes
22a.BLR.3	-53.91000	0.05000	106.80000	-51.07000	-0.36000	106.80000	6 Yes	Yes
22a.BLR.4	-51.07000	-0.36000	106.80000	-51.49000	-5.47000	106.80000	11 Yes	Yes
22a.BLR.5	-51.49000	-5.47000	106.80000	-62.13000	-4.49000	106.80000	22 Yes	Yes
22a.BLR.6	-62.13000	-4.49000	106.80000	-61.21000	6.41000	106.80000	22 Yes	Yes
24.BLR.1	-52.15000	-8.92000	106.80000	-58.40000	-6.77000	106.80000	14 Yes	Yes
24.BLR.2	-55.69000	-19.65000	106.80000	-52.15000	-8.92000	106.80000	23 Yes	Yes
24.BLR.3	-55.06000	-20.13000	106.80000	-55.69000	-19.65000	106.80000	2 Yes	Yes
24.BLR.4	-57.72000	-24.63000	106.80000	-55.06000	-20.13000	106.80000	11 Yes	Yes
24.BLR.5	-56.50000	-25.47000	106.80000	-57.72000	-24.63000	106.80000	3 Yes	Yes
24.BLR.6	-57.82000	-27.66000	106.80000	-56.50000	-25.47000	106.80000	6 Yes	Yes
24.BLR.7	-56.55000	-28.53000	106.80000	-57.82000	-27.66000	106.80000	4 Yes	Yes
24.BLR.8	-63.49000	-39.35000	106.80000	-56.55000	-28.53000	106.80000	26 Yes	Yes
24.BLR.9	-74.38000	-32.49000	106.80000	-63.49000	-39.35000	106.80000	26 Yes	Yes
24.BLR.10	-67.55000	-21.64000	106.80000	-74.38000	-32.49000	106.80000	26 Yes	Yes
24.BLR.11	-65.43000	-22.97000	106.80000	-67.55000	-21.64000	106.80000	6 Yes	Yes
24.BLR.12	-62.48000	-18.37000	106.80000	-65.43000	-22.97000	106.80000	11 Yes	Yes
24.BLR.13	-58.40000	-6.77000	106.80000	-62.48000	-18.37000	106.80000	25 Yes	Yes
FH.1	-24.98000	-52.40000	106.80000	5.28000	-44.73000	106.80000	63 Yes	Yes
FH.2	5.28000	-44.73000	106.80000	6.61000	-50.14000	106.80000	12 Yes	Yes
FH.3	6.61000	-50.14000	106.80000	3.34000	-50.94000	106.80000	7 Yes	Yes
FH.4	3.34000	-50.94000	106.80000	4.92000	-57.37000	106.80000	14 Yes	Yes
FH.5	4.92000	-57.37000	106.80000	-22.10000	-64.19000	106.80000	56 Yes	Yes
FH.6	-22.10000	-64.19000	106.80000	-24.98000	-52.40000	106.80000	25 Yes	Yes
PP.Sch.1	27.17000	-40.03000	106.80000	40.58000	-37.27000	106.80000	28 Yes	Yes
PP.Sch.2	29.53000	-51.47000	106.80000	27.17000	-40.03000	106.80000	24 Yes	Yes
PP.Sch.3	40.58000	-37.27000	106.80000	42.93000	-48.71000	106.80000	24 Yes	Yes
PP.Sch.4	42.93000	-48.71000	106.80000	29.53000	-51.47000	106.80000	28 Yes	Yes
PP.Sch.5	29.95000	-51.38000	106.80000	30.66000	-55.53000	106.80000	9 Yes	Yes
PP.Sch.6	43.37000	-52.92000	106.80000	42.60000	-48.78000	106.80000	9 Yes	Yes
PP.Sch.7	30.66000	-55.53000	106.80000	43.37000	-52.92000	106.80000	26 Yes	Yes
PP.Sch.8	30.66000	-55.53000	106.80000	31.67000	-60.43000	106.80000	11 Yes	Yes
PP.Sch.9	44.37000	-57.82000	106.80000	43.37000	-52.92000	106.80000	11 Yes	Yes
PP.Sch.10	31.67000	-60.43000	106.80000	44.37000	-57.82000	106.80000	26 Yes	Yes
GH.1	40.64000	-37.57000	106.80000	50.99000	-35.52000	106.80000	22 Yes	Yes
GH.2	50.99000	-35.52000	106.80000	51.55000	-37.98000	106.80000	6 Yes	Yes
GH.3	51.55000	-37.98000	106.80000	55.16000	-37.46000	106.80000	8 Yes	Yes
GH.4	55.16000	-37.46000	106.80000	58.17000	-52.75000	106.80000	32 Yes	Yes
GH.5	58.17000	-52.75000	106.80000	57.11000	-53.02000	106.80000	3 Yes	Yes
GH.6	57.11000	-53.02000	106.80000	57.97000	-57.21000	106.80000	9 Yes	Yes
GH.7	57.97000	-57.21000	106.80000	53.71000	-58.07000	106.80000	9 Yes	Yes
GH.8	53.71000	-58.07000	106.80000	52.12000	-50.28000	106.80000	16 Yes	Yes
GH.9	52.12000	-50.28000	106.80000	43.20000	-52.05000	106.80000	19 Yes	Yes
27.BLR.1	5.43000	57.47000	106.80000	-13.45000	56.86000	106.80000	38 Yes	Yes
27.BLR.2	5.43000	49.32000	106.80000	5.43000	57.47000	106.80000	17 Yes	Yes

Name	X1	Y1	Z1	X2	Y2	Z2	Intervals	Calculate	Detailed
	[m]	[m]	[m]	[m]	[m]	[m]	[No.]		Results
27.BLR.3	3.28000	49.32000	106.80000	5.43000	49.32000	106.80000	5	Yes	Yes
27.BLR.4	3.26000	32.61000	106.80000	3.28000	49.32000	106.80000	34	Yes	Yes
27.BLR.5	-13.35000	32.54000	106.80000	3.26000	32.61000	106.80000	34	Yes	Yes
27.BLR.6	-13.29000	42.10000	106.80000	-13.35000	32.54000	106.80000	20	Yes	Yes
27.BLR.7	-11.75000	42.04000	106.80000	-13.29000	42.10000	106.80000	4	Yes	Yes
27.BLR.8	-11.65000	51.49000	106.80000	-11.75000	42.04000	106.80000	19	Yes	Yes
27.BLR.9	-13.52000	51.57000	106.80000	-11.65000	51.49000	106.80000	4	Yes	Yes
27.BLR.10	-13.45000	56.86000	106.80000	-13.52000	51.57000	106.80000	11	Yes	Yes
25.BLR.1	-5.31000	78.65000	106.80000	1.05000	78.56000	106.80000	13	Yes	Yes
25.BLR.2	1.05000	78.56000	106.80000	0.98000	75.16000	106.80000	7	Yes	Yes
25.BLR.3	0.98000	75.16000	106.80000	6.14000	75.12000	106.80000	11	Yes	Yes
25.BLR.4	6.14000	75.12000	106.80000	5.92000	60.51000	106.80000	30	Yes	Yes
25.BLR.5	5.92000	60.51000	106.80000	2.44000	60.57000	106.80000	7	Yes	Yes
25.BLR.6	2.44000	60.57000	106.80000	2.46000	61.58000	106.80000	3	Yes	Yes
25.BLR.7	2.46000	61.58000	106.80000	-7.28000	61.73000	106.80000	20	Yes	Yes
25.BLR.8	-7.28000	61.73000	106.80000	-7.19000	67.60000	106.80000	12	Yes	Yes
25.BLR.9	-7.19000	67.60000	106.80000	-5.43000	67.63000	106.80000	4	Yes	Yes
25.BLR.10	-5.43000	67.63000	106.80000	-5.31000	78.65000	106.80000	23	Yes	Yes
23.BLR.1	15.72000	105.18000	106.80000	-2.63000	108.65000	106.80000	38	Yes	Yes
23.BLR.2	10.63000	86.23000	106.80000	15.72000	105.18000	106.80000	40	Yes	Yes
23.BLR.3	8.99000	86.58000	106.80000	10.63000	86.23000	106.80000	4	Yes	Yes
23.BLR.4	7.56000	79.23000	106.80000	8.99000	86.58000	106.80000	15	Yes	Yes
23.BLR.5	-3.85000	80.93000	106.80000	7.56000	79.23000	106.80000	24	Yes	Yes
23.BLR.6	-0.21000	103.06000	106.80000	-3.85000	80.93000	106.80000	45	Yes	Yes
23.BLR.7	-3.57000	103.72000	106.80000	-0.21000	103.06000	106.80000	7	Yes	Yes
23.BLR.8	-2.63000	108.65000	106.80000	-3.57000	103.72000	106.80000	11	Yes	Yes
21.BLR.1	16.46000	127.30000	106.80000	3.53000	130.23000	106.80000	27	Yes	Yes
21.BLR.2	13.15000	111.25000	106.80000	16.46000	127.30000	106.80000	33	Yes	Yes
21.BLR.3	7.06000	112.63000	106.80000	13.15000	111.25000	106.80000	13	Yes	Yes
21.BLR.4	7.79000	116.16000	106.80000	7.06000	112.63000	106.80000	8	Yes	Yes
21.BLR.5	0.34000	117.81000	106.80000	7.79000	116.16000	106.80000	16	Yes	Yes
21.BLR.6	3.53000	130.23000	106.80000	0.34000	117.81000	106.80000	26	Yes	Yes
19.BLR.1	25.41000	154.93000	106.80000	19.86000	156.76000	106.80000	12	Yes	Yes
19.BLR.2	19.68000	136.44000	106.80000	25.41000	154.93000	106.80000	39	Yes	Yes
19.BLR.3	12.32000	138.92000	106.80000	19.68000	136.44000	106.80000	16	Yes	Yes
19.BLR.4	12.50000	139.53000	106.80000	12.32000	138.92000	106.80000	2	Yes	Yes
19.BLR.5	6.10000	141.59000	106.80000	12.50000	139.53000	106.80000	14	Yes	Yes
19.BLR.6	10.69000	156.14000	106.80000	6.10000	141.59000	106.80000	31	Yes	Yes
19.BLR.7	18.70000	153.46000	106.80000	10.69000	156.14000	106.80000	17	Yes	Yes
19.BLR.8	19.86000	156.76000	106.80000	18.70000	153.46000	106.80000	7	Yes	Yes

Displacement Grids

Name	Extrusion: Direction	X1	Y1	Z1	X2	Y2	Z2	Intervals	Extrusion: Distance	Extrusion: Intervals	Calculate	Detailed
		[m]	[m]	[m]	[m]	[m]	[m]	Along Line [No.]	[m]	Along [No.]		Results
Grid	Global X	-95.50000	-90.14000	106.80000	-	170.45000	106.80000	139	277.33000	139	Yes	Yes

Results : Immediate : Load Centres : Polygonal

Ref.	Name	x	y	z	δz	Stress: Calc. Level	Stress: Vertical	Stress: Sum Princ.	Vert. Strain
		[m]	[m]	[mOD]	[mm]	[mOD]	[kN/m²]	[kN/m²]	[µ]
1	Excavation	-2.84181	-3.05440	103.05000	-21.79026	102.91	-62.501	-138.35	-0.0020522
2	Amphitheatre Excavation	88.66000	86.94500	10.30000	-15.20091	105.15	-30.000	-71.592	-0.0016939
3	Fives Court Demolition	5.98287	6.36209	106.80000	-26.76207	106.78	-24.000	-57.499	-0.0017300
4	Squash Court Demolition	-3.12837	-11.13930	106.80000	-25.54588	106.78	-24.000	-57.441	-0.0017312
5	Building Loading	-2.84181	-3.05440	103.05000	-21.79026	102.91	-62.501	-138.35	-0.0020522
6	Fives Court Excavation	84.65696	15.45166	102.80000	-20.53324	102.66	-70.001	-166.35	-0.0020446
7	Fives Court Loading	84.65696	15.45166	102.80000	-20.53324	102.66	-70.001	-166.35	-0.0020446

Results : Consolidation : Load Centres : Polygonal

None

Results : Total : Load Centres : Polygonal

None

Results : Immediate : Displacement Data : Lines

Ref.	Name	x	y	z	δz	Stress: Calc. Level	Stress: Vertical	Stress: Sum Princ.	Vert. Strain
		[m]	[m]	[mOD]	[mm]	[mOD]	[kN/m²]	[kN/m²]	[µ]
1	20c.BLR.1	-61.43000	63.57000	106.80000	-0.00839	106.78	-40.510E-12	-324.37E-6	6.4874E-9
1	20c.BLR.1	-60.94408	63.45455	106.80000	-0.00951	106.78	-41.603E-12	-329.46E-6	6.5893E-9
1	20c.BLR.1	-60.45818	63.33909	106.80000	-0.01065	106.78	-42.727E-12	-334.65E-6	6.6931E-9
1	20c.BLR.1	-59.97227	63.22364	106.80000	-0.01183	106.78	-43.888E-12	-339.94E-6	6.7989E-9
1	20c.BLR.1	-59.48636	63.10818	106.80000	-0.01303	106.78	-45.083E-12	-345.33E-6	6.9067E-9
1	20c.BLR.1	-59.00045	62.99273	106.80000	-0.01427	106.78	-46.312E-12	-350.83E-6	7.0165E-9
1	20c.BLR.1	-57.51455	62.72271	106.80000	-0.01554	106.78	-47.583E-12	-356.42E-6	7.1284E-9
1	20c.BLR.1	-58.02864	62.76182	106.80000	-0.01685	106.78	-48.892E-12	-362.12E-6	7.2425E-9
1	20c.BLR.1	-57.54273	62.64636	106.80000	-0.01819	106.78	-50.240E-12	-367.93E-6	7.3587E-9
1	20c.BLR.1	-57.05682	62.53091	106.80000	-0.01956	106.78	-51.628E-12	-373.85E-6	7.4771E-9
1	20c.BLR.1	-56.57091	62.41545	106.80000	-0.02097	106.78	-53.062E-12	-379.89E-6	7.5977E-9
1	20c.BLR.1	-51.22591	61.14545	106.80000	-0.02242	106.78	-54.540E-12	-386.03E-6	7.7207E-9
1	20c.BLR.1	-55.59909	62.18455	106.80000	-0.02390	106.78	-56.062E-12	-392.30E-6	7.8460E-9
1	20c.BLR.1	-55.11318	62.06909	106.80000	-0.02543	106.78	-57.631E-12	-398.68E-6	7.9737E-9
1	20c.BLR.1	-54.62727	61.95364	106.80000	-0.02699	106.78	-59.249E-12	-405.19E-6	8.1038E-9
1	20c.BLR.1	-54.14136	61.83818	106.80000	-0.02859	106.78	-60.920E-12	-411.82E-6	8.2363E-9
1	20c.BLR.1	-53.65545	61.72273	106.80000	-0.03023	106.78	-62.643E-12	-418.57E-6	8.3715E-9
1	20c.BLR.1	-53.16955	61.60727	106.80000	-0.03191	106.78	-64.414E-12	-425.46E-6	8.5092E-9
1	20c.BLR.1	-52.68364	61.49182	106.80000	-0.03363	106.78	-66.244E-12	-432.47E-6	8.6495E-9
1	20c.BLR.1	-52.19773	61.37636	106.80000	-0.03540	106.78	-68.132E-12	-439.62E-6	8.7924E-9
1	20c.BLR.1	-51.71182	61.26091	106.80000	-0.03721	106.78	-70.078E-12	-446.91E-6	8.9381E-9
1	20c.BLR.1	-51.22591	61.14545	106.80000	-0.03906	106.78	-72.084E-12	-454.33E-6	9.0866E-9
1	20c.BLR.1	-50.74000	61.03000	106.80000	-0.04096	106.78	-74.152E-12	-461.90E-6	9.2379E-9
2	20c.BLR.2	-50.74000	61.03000	106.80000	-0.04096	106.78	-74.152E-12	-461.90E-6	9.2379E-9
2	20c.BLR.2	-50.84385	60.56538	106.80000	-0.04251	106.78	-75.815E-12	-467.88E-6	9.3575E-9
2	20c.BLR.2	-50.94769	60.10077	106.80000	-0.04409	106.78	-77.509E-12	-473.92E-6	9.4785E-9
2	20c.BLR.2	-51.05154	59.63615	106.80000	-0.04569	106.78	-79.239E-12	-480.04E-6	9.6008E-9
2	20c.BLR.2	-51.15538	59.17154	106.80000	-0.04732	106.78	-81.007E-12	-486.22E-6	9.7244E-9
2	20c.BLR.2	-51.25923	58.70692	106.80000	-0.04896	106.78	-82.809E-12	-492.47E-6	9.8494E-9
2	20c.BLR.2	-51.36308	58.24231	106.80000	-0.05064	106.78	-84.648E-12	-498.78E-6	9.9756E-9
2	20c.BLR.2	-51.46692	57.77769	106.80000	-0.05233	106.78	-86.523E-12	-505.16E-6	10.1039E-9
2	20c.BLR.2	-51.57077	57.30908	106.80000	-0.05403	106.78	-88.435E-12	-511.61E-6	10.2322E-9
2	20c.BLR.2	-51.67462	56.84846	106.80000	-0.05579	106.78	-90.388E-12	-518.12E-6	10.3629E-9
2	20c.BLR.2	-51.77846	56.38385	106.80000	-0.05756	106.78	-92.376E-12	-524.69E-6	10.4949E-9
2	20c.BLR.2	-51.88231	55.91923	106.80000	-0.05935	106.78	-94.403E-12	-531.33E-6	10.6279E-9
2	20c.BLR.2	-51.98615	55.45462	106.80000	-0.06116	106.78	-96.469E-12	-538.03E-6	10.7619E-9
2	20c.BLR.2	-52.09000	54.99000	106.80000	-0.06299	106.78	-98.573E-12	-544.79E-6	10.8966E-9
3	20c.BLR.3	-52.09000	54.99000	106.80000	-0.06299	106.78	-98.573E-12	-544.79E-6	10.8966E-9
3	20c.BLR.3	-52.43500	55.07500	106.80000	-0.06114	106.78	-96.358E-12	-537.65E-6	10.7539E-9
3	20c.BLR.3	-52.78000	55.16000	106.80000	-0.05932	106.78	-94.202E-12	-530.63E-6	10.6139E-9
4	20c.BLR.4	-52.78000	55.16000	106.80000	-0.05932	106.78	-94.202E-12	-530.63E-6	10.6139E-9



Highgate Junior School Sports Hall
Unloading and Loading Long Term

Job No.	Sheet No.	Rev.
3244		
Drg. Ref.		
Made by AC	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level [mOD]	Stress: Vertical [kN/m²]	Stress: Sum Princ. [kN/m²]	Vert. Strain [µ]
	[m]	[m]	[mOD]	[mm]					
4	20c.BLR.4	-52.98364	54.71364	106.80000	-0.06101	106.78	-96.113E-12	-536.84E-6	10.737E-9
4	20c.BLR.4	-52.98727	54.26727	106.80000	-0.06271	106.78	-98.056E-12	-543.10E-6	10.862E-9
4	20c.BLR.4	-53.09091	53.82091	106.80000	-0.06444	106.78	-100.03E-12	-549.40E-6	10.988E-9
4	20c.BLR.4	-53.19455	53.37455	106.80000	-0.06618	106.78	-102.04E-12	-555.75E-6	11.115E-9
4	20c.BLR.4	-53.29818	52.92818	106.80000	-0.06794	106.78	-104.07E-12	-562.15E-6	11.243E-9
4	20c.BLR.4	-52.40182	52.48182	106.80000	-0.06972	106.78	-106.15E-12	-568.59E-6	11.372E-9
4	20c.BLR.4	-53.50545	52.03545	106.80000	-0.07151	106.78	-108.25E-12	-575.07E-6	11.501E-9
4	20c.BLR.4	-53.60909	51.58909	106.80000	-0.07333	106.78	-110.38E-12	-581.60E-6	11.632E-9
4	20c.BLR.4	-53.71273	51.14273	106.80000	-0.07516	106.78	-112.54E-12	-588.16E-6	11.763E-9
4	20c.BLR.4	-53.81636	50.69636	106.80000	-0.07700	106.78	-114.74E-12	-594.76E-6	11.895E-9
4	20c.BLR.4	-53.92000	50.25000	106.80000	-0.07887	106.78	-116.96E-12	-601.40E-6	12.028E-9
5	20c.BLR.5	-53.92000	50.25000	106.80000	-0.07887	106.78	-116.96E-12	-601.40E-6	12.028E-9
5	20c.BLR.5	-54.40231	50.36385	106.80000	-0.07576	106.78	-113.03E-12	-589.63E-6	11.793E-9
5	20c.BLR.5	-54.88462	50.47769	106.80000	-0.07274	106.78	-109.26E-12	-578.14E-6	11.563E-9
5	20c.BLR.5	-55.36692	50.59154	106.80000	-0.06980	106.78	-105.62E-12	-566.93E-6	11.339E-9
5	20c.BLR.5	-55.85023	50.70538	106.80000	-0.06688	106.78	-102.13E-12	-555.99E-6	11.120E-9
5	20c.BLR.5	-56.33154	50.81923	106.80000	-0.06415	106.78	-98.770E-12	-545.31E-6	10.906E-9
5	20c.BLR.5	-56.81385	50.93308	106.80000	-0.06144	106.78	-95.540E-12	-534.89E-6	10.698E-9
5	20c.BLR.5	-57.29615	51.04692	106.80000	-0.05880	106.78	-92.428E-12	-524.71E-6	10.494E-9
5	20c.BLR.5	-57.77846	51.16077	106.80000	-0.05623	106.78	-89.431E-12	-514.77E-6	10.295E-9
5	20c.BLR.5	-58.26077	52.74662	106.80000	-0.05374	106.78	-86.548E-12	-505.07E-6	10.101E-9
5	20c.BLR.5	-58.74308	51.38846	106.80000	-0.05131	106.78	-83.774E-12	-495.59E-6	9.9119E-9
5	20c.BLR.5	-59.22538	51.50231	106.80000	-0.04895	106.78	-81.096E-12	-486.34E-6	9.7268E-9
5	20c.BLR.5	-59.70769	51.61615	106.80000	-0.04666	106.78	-78.520E-12	-477.30E-6	9.5461E-9
5	20c.BLR.5	-60.19000	51.73000	106.80000	-0.04442	106.78	-76.041E-12	-468.48E-6	9.3695E-9
6	20c.BLR.6	-60.41900	51.73000	106.80000	-0.04442	106.78	-76.041E-12	-468.48E-6	9.3695E-9
6	20c.BLR.6	-60.07600	52.21300	106.80000	-0.04314	106.78	-74.735E-12	-463.77E-6	9.2754E-9
6	20c.BLR.6	-59.96200	52.69600	106.80000	-0.04186	106.78	-73.440E-12	-459.08E-6	9.1815E-9
6	20c.BLR.6	-59.84800	53.17900	106.80000	-0.04059	106.78	-72.158E-12	-454.40E-6	9.0880E-9
6	20c.BLR.6	-59.73400	53.66200	106.80000	-0.03933	106.78	-70.891E-12	-449.74E-6	8.9947E-9
6	20c.BLR.6	-59.62000	54.14500	106.80000	-0.03808	106.78	-69.640E-12	-445.09E-6	8.9018E-9
6	20c.BLR.6	-59.50600	54.62800	106.80000	-0.03684	106.78	-68.399E-12	-440.46E-6	8.8092E-9
6	20c.BLR.6	-59.39200	55.11100	106.80000	-0.03561	106.78	-67.174E-12	-435.85E-6	8.7170E-9
6	20c.BLR.6	-59.27800	55.59400	106.80000	-0.03439	106.78	-65.965E-12	-431.26E-6	8.6252E-9
6	20c.BLR.6	-59.16400	56.07700	106.80000	-0.03319	106.78	-64.770E-12	-426.70E-6	8.5339E-9
6	20c.BLR.6	-59.05000	56.56000	106.80000	-0.03199	106.78	-63.592E-12	-422.15E-6	8.4430E-9
7	20c.BLR.7	-59.05000	56.56000	106.80000	-0.03199	106.78	-63.592E-12	-422.15E-6	8.4430E-9
7	20c.BLR.7	-59.53000	56.67500	106.80000	-0.03024	106.78	-61.733E-12	-414.92E-6	8.2983E-9
7	20c.BLR.7	-60.01000	56.79000	106.80000	-0.02852	106.78	-59.939E-12	-407.83E-6	8.1566E-9
7	20c.BLR.7	-60.49000	56.90500	106.80000	-0.02686	106.78	-58.202E-12	-400.90E-6	8.0179E-9
7	20c.BLR.7	-60.97000	57.02000	106.80000	-0.02524	106.78	-56.521E-12	-394.11E-6	7.8821E-9
7	20c.BLR.7	-61.45000	57.13500	106.80000	-0.02366	106.78	-54.898E-12	-387.46E-6	7.7491E-9
7	20c.BLR.7	-61.93000	57.25000	106.80000	-0.02212	106.78	-53.327E-12	-380.95E-6	7.6189E-9
7	20c.BLR.7	-62.41000	57.36500	106.80000	-0.02063	106.78	-51.809E-12	-374.57E-6	7.4914E-9
7	20c.BLR.7	-62.89000	57.48000	106.80000	-0.01918	106.78	-50.339E-12	-368.32E-6	7.3665E-9
8	20c.BLR.8	-62.89000	57.48000	106.80000	-0.01918	106.78	-50.339E-12	-368.32E-6	7.3665E-9
8	20c.BLR.8	-62.77769	57.94846	106.80000	-0.01830	106.78	-49.530E-12	-364.85E-6	7.2970E-9
8	20c.BLR.8	-62.66538	58.41692	106.80000	-0.01743	106.78	-48.730E-12	-361.39E-6	7.2278E-9
8	20c.BLR.8	-62.55308	58.88538	106.80000	-0.01656	106.78	-47.939E-12	-357.94E-6	7.1588E-9
8	20c.BLR.8	-62.44077	59.35385	106.80000	-0.01571	106.78	-47.151E-12	-354.51E-6	7.0902E-9
8	20c.BLR.8	-62.32846	59.82331	106.80000	-0.01486	106.78	-46.376E-12	-351.08E-6	7.0218E-9
8	20c.BLR.8	-62.21615	60.29077	106.80000	-0.01402	106.78	-45.614E-12	-347.69E-6	6.9538E-9
8	20c.BLR.8	-62.10385	60.75923	106.80000	-0.01319	106.78	-44.855E-12	-344.30E-6	6.8861E-9
8	20c.BLR.8	-61.99154	61.22769	106.80000	-0.01237	106.78	-44.109E-12	-340.93E-6	6.8187E-9
8	20c.BLR.8	-61.87923	61.69615	106.80000	-0.01156	106.78	-43.370E-12	-337.58E-6	6.7517E-9
8	20c.BLR.8	-61.76692	62.16462	106.80000	-0.01075	106.78	-42.641E-12	-334.25E-6	6.6850E-9
8	20c.BLR.8	-61.65462	62.63308	106.80000	-0.00996	106.78	-41.922E-12	-330.94E-6	6.6187E-9
8	20c.BLR.8	-61.54231	63.10154	106.80000	-0.00917	106.78	-41.210E-12	-327.64E-6	6.5528E-9
8	20c.BLR.8	-61.43000	63.57000	106.80000	-0.00839	106.78	-40.510E-12	-324.37E-6	6.4874E-9
9	22.BLR.1	-60.43000	32.30000	106.80000	-0.13511	106.78	-182.66E-12	-779.42E-6	15.588E-9
9	22.BLR.1	-59.25882	32.30471	106.80000	-0.13972	106.78	-189.57E-12	-796.17E-6	15.923E-9
9	22.BLR.1	-59.48765	32.30941	106.80000	-0.14448	106.78	-196.79E-12	-813.39E-6	16.268E-9
9	22.BLR.1	-59.01647	32.31412	106.80000	-0.14936	106.78	-204.32E-12	-831.08E-6	16.622E-9
9	22.BLR.1	-58.54529	32.31882	106.80000	-0.15437	106.78	-212.20E-12	-849.27E-6	16.985E-9
9	22.BLR.1	-58.07412	32.32353	106.80000	-0.15951	106.78	-220.44E-12	-867.96E-6	17.359E-9
9	22.BLR.1	-57.60294	32.32824	106.80000	-0.16479	106.78	-228.07E-12	-887.17E-6	17.743E-9
9	22.BLR.1	-57.13176	32.33294	106.80000	-0.17021	106.78	-238.07E-12	-906.93E-6	18.139E-9
9	22.BLR.1	-56.66059	32.33765	106.80000	-0.17577	106.78	-247.50E-12	-927.24E-6	18.545E-9
9	22.BLR.1	-56.18941	32.34235	106.80000	-0.18148	106.78	-257.37E-12	-948.13E-6	18.963E-9
9	22.BLR.1	-55.71824	32.34706	106.80000	-0.18734	106.78	-267.70E-12	-969.62E-6	19.392E-9
9	22.BLR.1	-55.24706	32.35176	106.80000	-0.19336	106.78	-278.52E-12	-991.73E-6	19.835E-9
9	22.BLR.1	-54.77588	32.35647	106.80000	-0.19953	106.78	-289.85E-12	-1014.01E-6	20.289E-9
9	22.BLR.1	-54.30471	32.36118	106.80000	-0.20586	106.78	-301.72E-12	-1037.09E-6	20.757E-9
9	22.BLR.1	-53.83353	32.36588	106.80000	-0.21236	106.78	-314.17E-12	-1061.02E-6	21.239E-9
9	22.BLR.1	-53.36235	32.37059	106.80000	-0.21903	106.78	-327.21E-12	-1086.07E-6	21.735E-9
9	22.BLR.1	-52.89118	32.37529	106.80000	-0.22587	106.78	-340.90E-12	-1112.32E-6	22.245E-9
9	22.BLR.1	-52.42000	32.38000	106.80000	-0.23289	106.78	-355.25E-12	-1139.85E-6	22.771E-9
10	22.BLR.2	-52.42000	32.38000	106.80000	-0.23289	106.78	-355.25E-12	-1139.85E-6	22.771E-9
10	22.BLR.2	-52.41897	31.88077	106.80000	-0.23810	106.78	-364.84E-12	-1161.56E-6	23.121E-9
10	22.BLR.2	-52.41795	31.38154	106.80000	-0.24337	106.78	-374.62E-12	-1184.73E-6	23.474E-9
10	22.BLR.2	-52.41692	30.88231	106.80000	-0.24869	106.78	-384.57E-12	-1208.49E-6	23.830E-9
10	22.BLR.2	-52.41590	30.38308	106.80000	-0.25405	106.78	-394.69E-12	-1232.80E-6	24.187E-9
10	22.BLR.2	-52.41487	29.88385	106.80000	-0.25946	106.78	-404.97E-12	-1257.65E-6	24.547E-9
10	22.BLR.2	-52.41385	29.38462	106.80000	-0.26491	106.78	-415.41E-12	-1283.04E-6	24.908E-9
10	22.BLR.2	-52.41282	28.88538	106.80000	-0.27040	106.78	-425.99E-12	-1308.97E-6	25.271E-9
10	22.BLR.2	-52.41179	28.38615	106.80000	-0.27592	106.78	-436.73E-12	-1335.42E-6	25.635E-9
10	22.BLR.2	-52.41077	27.88692	106.80000	-0.28148	106.78	-447.60E-12	-1362.40E-6	26.000E-9
10	22.BLR.2	-52.40974	27.38769	106.80000	-0.28707	106.78	-458.59E-12	-1389.91E-6	26.365E-9
10	22.BLR.2	-52.40872	26.88846	106.80000	-0.29269	106.78	-469.70E-12	-1417.93E-6	26.731E-9
10	22.BLR.2	-52.40769	26.38923	106.80000	-0.29833	106.78	-480.93E-12	-1446.46E-6	27.098E-9
10	22.BLR.2	-52.40667	25.89000	106.80000	-0.30403	106.78	-492.24E-12	-1475.50E-6	27.468E-9
10	22.BLR.2	-52.40564	25.39077	106.80000	-0.30968	106.78	-503.65E-12	-1505.05E-6	27.829E-9
10	22.BLR.2	-52.40462	24.89154	106.80000	-0.31538	106.78	-515.12E-12	-1535.19E-6	28.194E-9
10	22.BLR.2	-52.40359	24.39231	106.8000					



Highgate Junior School Sports Hall Unloading and Loading Long Term

Job No.	Sheet No.	Rev.
3244		
Drg. Ref.		
Made by AC	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level [mOD]	Stress: Vertical [kN/m²]	Stress: Sum Princ. [kN/m²]	Vert. Strain [µ]
	[m]	[m]	[mOD]	[mm]					
12	22.BLR.4	-54.27000	9.35000	106.80000	-0.41336	106.78	-649.40E-12	-0.0016292	32.584E-9
13	22.BLR.5	-54.27000	9.35000	106.80000	-0.41336	106.78	-649.40E-12	-0.0016292	32.584E-9
13	22.BLR.5	-54.71286	9.35143	106.80000	-0.39988	106.78	-617.16E-12	-0.0015829	31.657E-9
13	22.BLR.5	-55.15571	9.35286	106.80000	-0.38684	106.78	-586.87E-12	-0.0015383	30.766E-9
13	22.BLR.5	-55.59857	9.35429	106.80000	-0.37422	106.78	-558.39E-12	-0.0014954	29.909E-9
13	22.BLR.5	-56.04143	9.35571	106.80000	-0.36201	106.78	-531.57E-12	-0.0014542	29.084E-9
13	22.BLR.5	-56.48429	9.35714	106.80000	-0.35019	106.78	-506.32E-12	-0.0014145	28.289E-9
13	22.BLR.5	-56.92714	9.35857	106.80000	-0.33875	106.78	-482.51E-12	-0.0013762	27.524E-9
13	22.BLR.5	-57.37000	9.36000	106.80000	-0.32767	106.78	-460.06E-12	-0.0013393	26.786E-9
14	22.BLR.6	-57.37000	9.36000	106.80000	-0.32767	106.78	-460.06E-12	-0.0013393	26.786E-9
14	22.BLR.6	-57.77250	8.91250	106.80000	-0.32977	106.78	-461.80E-12	-0.0013427	26.854E-9
14	22.BLR.6	-57.37500	8.46500	106.80000	-0.33180	106.78	-463.37E-12	-0.0013458	26.916E-9
14	22.BLR.6	-57.37750	8.01750	106.80000	-0.33376	106.78	-464.74E-12	-0.0013486	26.972E-9
14	22.BLR.6	-57.38000	7.57000	106.80000	-0.33564	106.78	-465.94E-12	-0.0013511	27.022E-9
15	22.BLR.7	-57.38000	7.57000	106.80000	-0.33564	106.78	-465.94E-12	-0.0013511	27.022E-9
15	22.BLR.7	-57.78250	7.17250	106.80000	-0.33742	106.78	-442.65E-12	-0.0013121	26.242E-9
15	22.BLR.7	-58.34000	7.57857	106.80000	-0.31215	106.78	-420.78E-12	-0.0012746	25.492E-9
15	22.BLR.7	-58.82000	7.58286	106.80000	-0.30101	106.78	-400.21E-12	-0.0012386	24.772E-9
15	22.BLR.7	-59.30000	7.58714	106.80000	-0.29026	106.78	-380.86E-12	-0.0012039	24.078E-9
15	22.BLR.7	-59.78000	7.59143	106.80000	-0.27987	106.78	-362.63E-12	-0.0011706	23.411E-9
15	22.BLR.7	-60.26000	7.59571	106.80000	-0.26983	106.78	-345.46E-12	-0.0011384	22.769E-9
15	22.BLR.7	-60.74000	7.60000	106.80000	-0.26014	106.78	-329.28E-12	-0.0011075	22.150E-9
15	22.BLR.7	-61.22000	7.60429	106.80000	-0.25078	106.78	-314.01E-12	-0.0010777	21.554E-9
15	22.BLR.7	-61.70000	7.60857	106.80000	-0.24173	106.78	-299.59E-12	-0.0010490	20.979E-9
15	22.BLR.7	-62.18000	7.61286	106.80000	-0.23299	106.78	-285.98E-12	-0.0010213	20.425E-9
15	22.BLR.7	-62.66000	7.61714	106.80000	-0.22454	106.78	-271.16E-12	-0.0009943	19.891E-9
15	22.BLR.7	-63.14000	7.62143	106.80000	-0.21638	106.78	-260.94E-12	-0.0009686	19.375E-9
15	22.BLR.7	-63.62000	7.62571	106.80000	-0.20849	106.78	-249.42E-12	-0.0009439	18.878E-9
15	22.BLR.7	-64.10000	7.63000	106.80000	-0.20086	106.78	-238.52E-12	-0.0009187	18.397E-9
15	22.BLR.7	-64.58000	7.63429	106.80000	-0.19349	106.78	-228.19E-12	-0.0008946	17.933E-9
15	22.BLR.7	-65.06000	7.63857	106.80000	-0.18637	106.78	-218.40E-12	-0.0008714	17.485E-9
15	22.BLR.7	-65.54000	7.64286	106.80000	-0.17947	106.78	-209.12E-12	-0.0008492	17.051E-9
15	22.BLR.7	-66.02000	7.64714	106.80000	-0.17281	106.78	-200.32E-12	-0.0008279	16.632E-9
15	22.BLR.7	-66.50000	7.65143	106.80000	-0.16637	106.78	-191.96E-12	-0.0008076	16.227E-9
15	22.BLR.7	-66.98000	7.65571	106.80000	-0.16014	106.78	-184.03E-12	-0.0007882	15.835E-9
16	22.BLR.8	-67.46000	7.66000	106.80000	-0.15411	106.78	-176.48E-12	-0.0007696	15.466E-9
16	22.BLR.8	-67.46000	7.66000	106.80000	-0.15411	106.78	-176.48E-12	-0.0007696	15.466E-9
16	22.BLR.8	-67.45814	8.15674	106.80000	-0.15321	106.78	-176.07E-12	-0.0007558	15.431E-9
16	22.BLR.8	-67.45628	8.65349	106.80000	-0.15226	106.78	-175.59E-12	-0.0007426	15.403E-9
16	22.BLR.8	-67.45442	9.15023	106.80000	-0.15128	106.78	-175.06E-12	-0.0007299	15.372E-9
16	22.BLR.8	-67.45256	9.64698	106.80000	-0.15025	106.78	-174.47E-12	-0.0007176	15.343E-9
16	22.BLR.8	-67.45070	10.14372	106.80000	-0.14919	106.78	-173.82E-12	-0.0007058	15.302E-9
16	22.BLR.8	-67.44884	10.64047	106.80000	-0.14809	106.78	-173.12E-12	-0.0006943	15.262E-9
16	22.BLR.8	-67.44698	11.13721	106.80000	-0.14696	106.78	-172.37E-12	-0.0006831	15.220E-9
16	22.BLR.8	-67.44512	11.63395	106.80000	-0.14579	106.78	-171.55E-12	-0.0006722	15.175E-9
16	22.BLR.8	-67.44326	12.13070	106.80000	-0.14459	106.78	-170.69E-12	-0.0006615	15.127E-9
16	22.BLR.8	-67.44140	12.62744	106.80000	-0.14335	106.78	-169.78E-12	-0.0006510	15.076E-9
16	22.BLR.8	-67.43953	13.12419	106.80000	-0.14209	106.78	-168.81E-12	-0.0006406	15.023E-9
16	22.BLR.8	-67.43767	13.62093	106.80000	-0.14079	106.78	-167.80E-12	-0.0006304	14.967E-9
16	22.BLR.8	-67.43581	14.11767	106.80000	-0.13946	106.78	-166.73E-12	-0.0006204	14.908E-9
16	22.BLR.8	-67.43395	14.61442	106.80000	-0.13810	106.78	-165.63E-12	-0.0006106	14.847E-9
16	22.BLR.8	-67.43209	15.11116	106.80000	-0.13671	106.78	-164.47E-12	-0.0006010	14.784E-9
16	22.BLR.8	-67.43023	15.60791	106.80000	-0.13530	106.78	-163.27E-12	-0.0005916	14.718E-9
16	22.BLR.8	-67.42837	16.10465	106.80000	-0.13386	106.78	-162.03E-12	-0.0005824	14.650E-9
16	22.BLR.8	-67.42651	16.60140	106.80000	-0.13240	106.78	-160.74E-12	-0.0005734	14.579E-9
16	22.BLR.8	-67.42465	17.09814	106.80000	-0.13091	106.78	-159.42E-12	-0.0005645	14.506E-9
16	22.BLR.8	-67.42279	17.59488	106.80000	-0.12940	106.78	-158.06E-12	-0.0005558	14.431E-9
16	22.BLR.8	-67.42093	18.09163	106.80000	-0.12786	106.78	-156.66E-12	-0.0005472	14.354E-9
16	22.BLR.8	-67.41907	18.58837	106.80000	-0.12631	106.78	-155.23E-12	-0.0005387	14.275E-9
16	22.BLR.8	-67.41721	19.08512	106.80000	-0.12474	106.78	-153.76E-12	-0.0005303	14.194E-9
16	22.BLR.8	-67.41535	19.58186	106.80000	-0.12315	106.78	-152.26E-12	-0.0005220	14.111E-9
16	22.BLR.8	-67.41349	20.07860	106.80000	-0.12154	106.78	-150.74E-12	-0.0005138	14.026E-9
16	22.BLR.8	-67.41163	20.57535	106.80000	-0.11991	106.78	-149.18E-12	-0.0005058	13.939E-9
16	22.BLR.8	-67.40977	21.07209	106.80000	-0.11827	106.78	-147.60E-12	-0.0004979	13.851E-9
16	22.BLR.8	-67.40791	21.56884	106.80000	-0.11662	106.78	-145.99E-12	-0.0004902	13.760E-9
16	22.BLR.8	-67.40605	22.06558	106.80000	-0.11493	106.78	-144.35E-12	-0.0004826	13.669E-9
16	22.BLR.8	-67.40419	22.56233	106.80000	-0.11327	106.78	-142.71E-12	-0.0004752	13.575E-9
16	22.BLR.8	-67.40233	23.05907	106.80000	-0.11158	106.78	-141.04E-12	-0.0004679	13.481E-9
16	22.BLR.8	-67.40047	23.55581	106.80000	-0.10988	106.78	-139.35E-12	-0.0004607	13.385E-9
16	22.BLR.8	-67.39860	24.05256	106.80000	-0.10817	106.78	-137.65E-12	-0.0004536	13.287E-9
16	22.BLR.8	-67.39674	24.54930	106.80000	-0.10645	106.78	-135.93E-12	-0.0004465	13.189E-9
16	22.BLR.8	-67.39488	25.04605	106.80000	-0.10472	106.78	-134.20E-12	-0.0004395	13.089E-9
16	22.BLR.8	-67.39302	25.54279	106.80000	-0.10299	106.78	-132.45E-12	-0.0004326	12.988E-9
16	22.BLR.8	-67.39116	26.03953	106.80000	-0.10126	106.78	-130.70E-12	-0.0004258	12.886E-9
16	22.BLR.8	-67.38930	26.53628	106.80000	-0.09952	106.78	-128.93E-12	-0.0004191	12.783E-9
16	22.BLR.8	-67.38744	27.03302	106.80000	-0.09777	106.78	-127.16E-12	-0.0004125	12.679E-9
16	22.BLR.8	-67.38558	27.52977	106.80000	-0.09603	106.78	-125.39E-12	-0.0004060	12.574E-9
16	22.BLR.8	-67.38372	28.02651	106.80000	-0.09428	106.78	-123.61E-12	-0.0004006	12.469E-9
16	22.BLR.8	-67.38186	28.52326	106.80000	-0.09253	106.78	-121.83E-12	-0.0003953	12.362E-9
16	22.BLR.8	-67.38000	29.02000	106.80000	-0.09079	106.78	-120.05E-12	-0.0003901	12.256E-9
17	22.BLR.9	-67.38000	29.02000	106.80000	-0.09079	106.78	-120.05E-12	-0.0003901	12.256E-9
17	22.BLR.9	-66.88571	29.01429	106.80000	-0.09451	106.78	-124.61E-12	-0.0004266	12.523E-9
17	22.BLR.9	-66.39143	29.00857	106.80000	-0.09834	106.78	-129.38E-12	-0.0004639	12.798E-9
17	22.BLR.9	-65.89714	29.00286	106.80000	-0.10229	106.78	-134.38E-12	-0.0005016	13.080E-9
17	22.BLR.9	-65.40286	28.99714	106.80000	-0.10636	106.78	-139.60E-12	-0.0005396	13.371E-9
17	22.BLR.9	-64.90857	28.99143	106.80000	-0.11053	106.78	-145.54E-12	-0.0005783	13.671E-9
17	22.BLR.9	-64.41429	28.98571	106.80000	-0.11487	106.78	-150.80E-12	-0.0006165	13.979E-9
17	22.BLR.9	-63.92000	28.98000	106.80000	-0.11932	106.78	-156.80E-12	-0.0006552	14.296E-9
17	22.BLR.9	-63.42571	28.97429	106.80000	-0.12390	106.78	-163.09E-12	-0.0006943	14.623E-9
17	22.BLR.9	-62.93143	28.96857	106.80000	-0.12863	106.78	-169.67E-12	-0.0007338	14.960E-9
17	22.BLR.9	-62.43714	28.96286	106.80000	-0.13350	106.78	-176.58E-12	-0.0007736	15.307E-9
17	22.BLR.9	-61.94286	28.95714	106.80000	-0.13851	106.78	-183.83E-12	-0.0008137	15.664E-9
17	22.BLR.9	-61.44857	28.95143	106.80000	-0.14368	106.78	-191.43E-12	-0.0008541	16.033E-9
17	22.BLR.9	-60.95429	28.94571	106.80000	-0.14900	106.78	-199.41E-12	-0.000894	



Highgate Junior School Sports Hall
Unloading and Loading Long Term

Job No.	Sheet No.	Rev.
3244		
Drg. Ref.		
Made by AC	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level [mOD]	Stress: Vertical [kN/m²]	Stress: Sum Princ. [kN/m²]	Vert. Strain [µ]
		[m]	[m]	[mOD]	[mm]				
20	22a.BLR.2	-53.81500	0.97167	106.80000	-0.46541	106.78	-689.27E-12	-0.0016993	33.986E-9
20	22a.BLR.2	-53.86250	0.51083	106.80000	-0.46460	106.78	-682.53E-12	-0.0016906	33.811E-9
20	22a.BLR.2	-53.91000	0.05000	106.80000	-0.46365	106.78	-675.56E-12	-0.0016814	33.628E-9
21	22a.BLR.3	-53.91000	0.05000	106.80000	-0.46365	106.78	-675.56E-12	-0.0016814	33.628E-9
21	22a.BLR.3	-53.43667	-0.01833	106.80000	-0.48079	106.78	-713.17E-12	-0.0017343	34.686E-9
21	22a.BLR.3	-52.96333	0.08667	106.80000	-0.49057	106.78	-753.35E-12	-0.0017994	35.788E-9
21	22a.BLR.3	-52.44000	-0.15500	106.80000	-0.51703	106.78	-796.30E-12	-0.0018469	36.937E-9
21	22a.BLR.3	-52.01667	-0.22333	106.80000	-0.53619	106.78	-842.25E-12	-0.0019068	38.137E-9
21	22a.BLR.3	-51.54333	-0.29167	106.80000	-0.55609	106.78	-891.45E-12	-0.0019695	39.389E-9
21	22a.BLR.3	-51.07000	-0.36000	106.80000	-0.57675	106.78	-944.17E-12	-0.0020349	40.697E-9
22	22a.BLR.4	-51.07000	-0.36000	106.80000	-0.57675	106.78	-944.17E-12	-0.0020349	40.697E-9
22	22a.BLR.4	-51.10818	-0.82455	106.80000	-0.57570	106.78	-933.47E-12	-0.0020227	40.455E-9
22	22a.BLR.4	-51.14636	-1.28909	106.80000	-0.57448	106.78	-922.45E-12	-0.0020101	40.203E-9
22	22a.BLR.4	-51.18455	-1.75364	106.80000	-0.57308	106.78	-911.11E-12	-0.0019971	39.941E-9
22	22a.BLR.4	-51.22273	-2.21818	106.80000	-0.57151	106.78	-899.49E-12	-0.0019835	39.670E-9
22	22a.BLR.4	-51.26091	-2.68273	106.80000	-0.56977	106.78	-887.61E-12	-0.0019695	39.390E-9
22	22a.BLR.4	-51.29909	-3.14727	106.80000	-0.56786	106.78	-875.49E-12	-0.0019551	39.102E-9
22	22a.BLR.4	-51.33727	-3.61182	106.80000	-0.56578	106.78	-863.15E-12	-0.0019403	38.805E-9
22	22a.BLR.4	-51.37545	-4.07636	106.80000	-0.56354	106.78	-850.61E-12	-0.0019250	38.501E-9
22	22a.BLR.4	-51.41364	-4.54091	106.80000	-0.56114	106.78	-837.90E-12	-0.0019095	38.189E-9
22	22a.BLR.4	-51.45182	-5.00545	106.80000	-0.55857	106.78	-825.04E-12	-0.0018936	37.870E-9
22	22a.BLR.4	-51.49000	-5.47000	106.80000	-0.55584	106.78	-812.04E-12	-0.0018773	37.546E-9
23	22a.BLR.5	-51.49000	-5.47000	106.80000	-0.55584	106.78	-812.04E-12	-0.0018773	37.546E-9
23	22a.BLR.5	-51.97364	-5.42545	106.80000	-0.53574	106.78	-768.30E-12	-0.0018188	36.376E-9
23	22a.BLR.5	-52.45727	-5.38091	106.80000	-0.51638	106.78	-727.35E-12	-0.0017627	35.254E-9
23	22a.BLR.5	-52.94091	-5.33636	106.80000	-0.49774	106.78	-689.01E-12	-0.0017014	34.177E-9
23	22a.BLR.5	-53.42455	-5.29182	106.80000	-0.47979	106.78	-653.08E-12	-0.0016572	33.144E-9
23	22a.BLR.5	-53.90818	-5.24727	106.80000	-0.46250	106.78	-619.37E-12	-0.0016076	32.151E-9
23	22a.BLR.5	-54.39182	-5.20273	106.80000	-0.44585	106.78	-587.73E-12	-0.0015599	31.198E-9
23	22a.BLR.5	-54.87545	-5.15818	106.80000	-0.42980	106.78	-558.02E-12	-0.0015141	30.281E-9
23	22a.BLR.5	-55.35909	-5.11364	106.80000	-0.41433	106.78	-530.10E-12	-0.0014700	29.400E-9
23	22a.BLR.5	-55.84273	-5.06909	106.80000	-0.39942	106.78	-503.84E-12	-0.0014277	28.553E-9
23	22a.BLR.5	-56.32636	-5.02455	106.80000	-0.38505	106.78	-479.12E-12	-0.0013869	27.738E-9
23	22a.BLR.5	-56.81000	-4.98000	106.80000	-0.37119	106.78	-455.86E-12	-0.0013477	26.953E-9
23	22a.BLR.5	-57.29364	-4.93545	106.80000	-0.35782	106.78	-433.93E-12	-0.0013099	26.198E-9
23	22a.BLR.5	-57.77727	-4.89091	106.80000	-0.34491	106.78	-412.26E-12	-0.0012735	25.470E-9
23	22a.BLR.5	-58.26091	-4.84636	106.80000	-0.33250	106.78	-393.77E-12	-0.0012385	24.769E-9
23	22a.BLR.5	-58.74455	-4.80182	106.80000	-0.32050	106.78	-375.37E-12	-0.0012047	24.093E-9
23	22a.BLR.5	-59.22818	-4.75727	106.80000	-0.30893	106.78	-357.99E-12	-0.0011721	23.442E-9
23	22a.BLR.5	-59.71182	-4.71273	106.80000	-0.29776	106.78	-341.57E-12	-0.0011407	22.814E-9
23	22a.BLR.5	-60.19545	-4.66818	106.80000	-0.28697	106.78	-326.05E-12	-0.0011094	22.208E-9
23	22a.BLR.5	-60.67909	-4.62364	106.80000	-0.27657	106.78	-311.37E-12	-0.0010811	21.623E-9
23	22a.BLR.5	-61.16273	-4.57909	106.80000	-0.26652	106.78	-297.48E-12	-0.0010529	21.058E-9
23	22a.BLR.5	-61.64636	-4.53455	106.80000	-0.25682	106.78	-284.32E-12	-0.0010256	20.513E-9
23	22a.BLR.5	-62.13000	-4.49000	106.80000	-0.24746	106.78	-271.86E-12	-999.31E-6	19.986E-9
24	22a.BLR.6	-62.13000	-4.49000	106.80000	-0.24746	106.78	-271.86E-12	-999.31E-6	19.986E-9
24	22a.BLR.6	-62.08818	-3.99455	106.80000	-0.24857	106.78	-274.79E-12	-0.0010052	20.105E-9
24	22a.BLR.6	-62.04636	-3.49909	106.80000	-0.24961	106.78	-277.65E-12	-0.0010110	20.220E-9
24	22a.BLR.6	-62.00455	-3.00364	106.80000	-0.25058	106.78	-280.45E-12	-0.0010166	20.332E-9
24	22a.BLR.6	-61.96273	-2.50818	106.80000	-0.25147	106.78	-283.18E-12	-0.0010220	20.440E-9
24	22a.BLR.6	-61.92091	-2.01273	106.80000	-0.25229	106.78	-285.83E-12	-0.0010279	20.548E-9
24	22a.BLR.6	-61.87909	-1.51727	106.80000	-0.25304	106.78	-288.41E-12	-0.0010323	20.646E-9
24	22a.BLR.6	-61.83727	-1.02182	106.80000	-0.25371	106.78	-290.90E-12	-0.0010371	20.742E-9
24	22a.BLR.6	-61.79545	-0.52636	106.80000	-0.25430	106.78	-293.31E-12	-0.0010417	20.835E-9
24	22a.BLR.6	-61.75364	-0.03091	106.80000	-0.25482	106.78	-295.62E-12	-0.0010462	20.923E-9
24	22a.BLR.6	-61.71182	0.46455	106.80000	-0.25526	106.78	-297.95E-12	-0.0010504	21.007E-9
24	22a.BLR.6	-61.67000	0.96000	106.80000	-0.25563	106.78	-299.97E-12	-0.0010544	21.087E-9
24	22a.BLR.6	-61.62818	1.45545	106.80000	-0.25591	106.78	-301.99E-12	-0.0010581	21.162E-9
24	22a.BLR.6	-61.58636	1.95091	106.80000	-0.25612	106.78	-303.91E-12	-0.0010616	21.233E-9
24	22a.BLR.6	-61.54455	2.44636	106.80000	-0.25625	106.78	-305.72E-12	-0.0010649	21.299E-9
24	22a.BLR.6	-61.50273	2.94091	106.80000	-0.25629	106.78	-307.42E-12	-0.0010684	21.360E-9
24	22a.BLR.6	-61.46091	3.43727	106.80000	-0.25627	106.78	-309.01E-12	-0.0010708	21.416E-9
24	22a.BLR.6	-61.41909	3.93273	106.80000	-0.25616	106.78	-310.48E-12	-0.0010734	21.468E-9
24	22a.BLR.6	-61.37727	4.42818	106.80000	-0.25597	106.78	-311.82E-12	-0.0010757	21.514E-9
24	22a.BLR.6	-61.33545	4.92364	106.80000	-0.25570	106.78	-313.05E-12	-0.0010778	21.556E-9
24	22a.BLR.6	-61.29364	5.41909	106.80000	-0.25536	106.78	-314.15E-12	-0.0010796	21.592E-9
24	22a.BLR.6	-61.25182	5.91455	106.80000	-0.25494	106.78	-315.12E-12	-0.0010812	21.623E-9
24	22a.BLR.6	-61.21000	6.41000	106.80000	-0.25443	106.78	-315.96E-12	-0.0010824	21.649E-9
25	24.BLR.1	-52.15000	-8.92000	106.80000	-0.51590	106.78	-683.96E-12	-0.0017069	34.138E-9
25	24.BLR.1	-52.59643	-8.76643	106.80000	-0.49937	106.78	-654.04E-12	-0.0016634	33.269E-9
25	24.BLR.1	-53.04286	-8.61286	106.80000	-0.48325	106.78	-625.61E-12	-0.0016213	32.426E-9
25	24.BLR.1	-53.48929	-8.45929	106.80000	-0.46785	106.78	-598.57E-12	-0.0015805	31.609E-9
25	24.BLR.1	-53.93571	-8.30571	106.80000	-0.45282	106.78	-572.85E-12	-0.0015409	30.817E-9
25	24.BLR.1	-54.38214	-8.15214	106.80000	-0.43827	106.78	-548.38E-12	-0.0015025	30.050E-9
25	24.BLR.1	-54.82857	-7.99857	106.80000	-0.42418	106.78	-525.10E-12	-0.0014653	29.305E-9
25	24.BLR.1	-55.27500	-7.84500	106.80000	-0.41052	106.78	-502.94E-12	-0.0014292	28.583E-9
25	24.BLR.1	-55.72143	-7.69143	106.80000	-0.39729	106.78	-481.84E-12	-0.0013941	27.883E-9
25	24.BLR.1	-56.16786	-7.53786	106.80000	-0.38447	106.78	-461.75E-12	-0.0013602	27.203E-9
25	24.BLR.1	-56.61429	-7.38429	106.80000	-0.37205	106.78	-442.61E-12	-0.0013272	26.544E-9
25	24.BLR.1	-57.06071	-7.23071	106.80000	-0.36000	106.78	-424.37E-12	-0.0012952	25.905E-9
25	24.BLR.1	-57.50714	-7.07714	106.80000	-0.34833	106.78	-406.99E-12	-0.0012642	25.284E-9
25	24.BLR.1	-57.95357	-6.92357	106.80000	-0.33702	106.78	-390.42E-12	-0.0012341	24.681E-9
25	24.BLR.1	-58.40000	-6.77000	106.80000	-0.32606	106.78	-374.62E-12	-0.0012048	24.097E-9
26	24.BLR.2	-55.69000	-19.65000	106.80000	-0.33141	106.78	-327.40E-12	-0.0011213	22.425E-9
26	24.BLR.2	-55.53609	-19.18348	106.80000	-0.33881	106.78	-338.10E-12	-0.0011423	22.846E-9
26	24.BLR.2	-55.38217	-18.71696	106.80000	-0.34628	106.78	-349.16E-12	-0.0011634	23.267E-9
26	24.BLR.2	-55.22826	-18.25043	106.80000	-0.35384	106.78	-360.58E-12	-0.0011855	23.710E-9
26	24.BLR.2	-55.07435	-17.78391	106.80000	-0.36147	106.78	-372.39E-12	-0.0012077	24.154E-9
26	24.BLR.2	-54.92043	-17.31739	106.80000	-0.36917	106.78	-384.58E-12	-0.0012303	24.606E-9
26	24.BLR.2	-54.76652	-16.85087	106.80000	-0.37694	106.78	-397.18E-12	-0.0012533	25.066E-9
26	24.BLR.2	-54.61261	-16.38435	106.80000	-0.38478	106.78	-409.19E-12	-0.0012767	25.534E-9
26	24.BLR.2	-54.45870	-15.91783	106.80000	-0.39268	106.78	-423.63E-12	-0.0013005	26.011E-9
26	24.BLR.2	-54.30478	-15.45130	106.80000	-0.40064	106.78	-437.50E-12	-0.0013248	26.495E-9
26	24.BLR.2	-54.15087	-14.98478	106.80000	-0.40865	1			



Highgate Junior School Sports Hall
Unloading and Loading Long Term

Job No.	Sheet No.	Rev.
3244		
Drg. Ref.		
Made by AC	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level [mOD]	Stress: Vertical [kN/m ²]	Stress: Sum Princ. [kN/m ²]	Vert. Strain [µ]
		[m]	[m]	[mOD]	[mm]				
30	24.BLR.6	-56.94000	-26.20000	106.80000	-0.25312	106.78	-224.77E-12	-901.27E-6	18.025E-9
30	24.BLR.6	-56.72000	-25.83500	106.80000	-0.26005	106.78	-232.34E-12	-918.87E-6	18.377E-9
30	24.BLR.6	-56.55000	-25.47000	106.80000	-0.26715	106.78	-240.21E-12	-936.90E-6	18.738E-9
31	24.BLR.7	-56.55000	-28.53000	106.80000	-0.24111	106.78	-209.13E-12	-864.03E-6	17.281E-9
31	24.BLR.7	-56.86750	-28.31250	106.80000	-0.23753	106.78	-206.12E-12	-856.75E-6	17.135E-9
31	24.BLR.7	-57.18554	-28.09500	106.80000	-0.23397	106.78	-203.13E-12	-849.48E-6	16.989E-9
31	24.BLR.7	-57.50250	-27.87750	106.80000	-0.23042	106.78	-200.16E-12	-842.20E-6	16.844E-9
31	24.BLR.7	-57.82000	-27.66000	106.80000	-0.22690	106.78	-197.21E-12	-834.93E-6	16.699E-9
32	24.BLR.8	-63.49000	-39.35000	106.80000	-0.09564	106.78	-82.004E-12	-498.45E-6	9.9689E-9
32	24.BLR.8	-63.22308	-38.93385	106.80000	-0.09942	106.78	-84.787E-12	-508.35E-6	10.167E-9
32	24.BLR.8	-62.95615	-38.51769	106.80000	-0.10333	106.78	-87.679E-12	-518.51E-6	10.370E-9
32	24.BLR.8	-62.68923	-38.10154	106.80000	-0.10734	106.78	-90.688E-12	-528.92E-6	10.578E-9
32	24.BLR.8	-62.42231	-37.68538	106.80000	-0.11148	106.78	-93.820E-12	-539.61E-6	10.792E-9
32	24.BLR.8	-62.15538	-37.26923	106.80000	-0.11575	106.78	-97.084E-12	-550.58E-6	11.012E-9
32	24.BLR.8	-61.88846	-36.85308	106.80000	-0.12014	106.78	-100.47E-12	-561.83E-6	11.237E-9
32	24.BLR.8	-61.62154	-36.43692	106.80000	-0.12466	106.78	-104.01E-12	-573.39E-6	11.468E-9
32	24.BLR.8	-61.35462	-36.02077	106.80000	-0.12932	106.78	-107.68E-12	-585.24E-6	11.705E-9
32	24.BLR.8	-61.08769	-35.60462	106.80000	-0.13412	106.78	-111.52E-12	-597.41E-6	11.948E-9
32	24.BLR.8	-60.82077	-35.18846	106.80000	-0.13906	106.78	-115.51E-12	-609.91E-6	12.198E-9
32	24.BLR.8	-60.55385	-34.77231	106.80000	-0.14414	106.78	-119.67E-12	-622.74E-6	12.455E-9
32	24.BLR.8	-60.28692	-34.35615	106.80000	-0.14938	106.78	-124.01E-12	-635.92E-6	12.718E-9
32	24.BLR.8	-60.02000	-33.94000	106.80000	-0.15477	106.78	-128.54E-12	-649.46E-6	12.989E-9
32	24.BLR.8	-59.75308	-33.52385	106.80000	-0.16032	106.78	-133.26E-12	-663.37E-6	13.267E-9
32	24.BLR.8	-59.48615	-33.10769	106.80000	-0.16604	106.78	-138.18E-12	-677.66E-6	13.553E-9
32	24.BLR.8	-59.21923	-32.69154	106.80000	-0.17193	106.78	-143.32E-12	-692.35E-6	13.847E-9
32	24.BLR.8	-58.95231	-32.27538	106.80000	-0.17798	106.78	-148.68E-12	-707.44E-6	14.147E-9
32	24.BLR.8	-58.68538	-31.85923	106.80000	-0.18422	106.78	-154.27E-12	-722.95E-6	14.459E-9
32	24.BLR.8	-58.41846	-31.44308	106.80000	-0.19064	106.78	-160.12E-12	-738.90E-6	14.778E-9
32	24.BLR.8	-58.15154	-31.02692	106.80000	-0.19724	106.78	-166.22E-12	-755.30E-6	15.106E-9
32	24.BLR.8	-57.88462	-30.61077	106.80000	-0.20404	106.78	-172.60E-12	-772.16E-6	15.443E-9
32	24.BLR.8	-57.61769	-30.19462	106.80000	-0.21104	106.78	-179.27E-12	-789.38E-6	15.790E-9
32	24.BLR.8	-57.35077	-29.77846	106.80000	-0.21824	106.78	-186.24E-12	-807.35E-6	16.147E-9
32	24.BLR.8	-57.08385	-29.36231	106.80000	-0.22565	106.78	-193.53E-12	-825.71E-6	16.514E-9
32	24.BLR.8	-56.81692	-28.94615	106.80000	-0.23327	106.78	-201.16E-12	-844.60E-6	16.892E-9
32	24.BLR.8	-56.55000	-28.53000	106.80000	-0.24111	106.78	-209.13E-12	-864.03E-6	17.281E-9
33	24.BLR.9	-74.31846	-27.49000	106.80000	-0.05176	106.78	-54.402E-12	-391.58E-6	7.817E-9
33	24.BLR.9	-73.96115	-32.75385	106.80000	-0.05327	106.78	-55.342E-12	-395.57E-6	7.9113E-9
33	24.BLR.9	-73.54231	-33.01769	106.80000	-0.05479	106.78	-56.292E-12	-399.57E-6	7.9913E-9
33	24.BLR.9	-73.12346	-33.28154	106.80000	-0.05633	106.78	-57.256E-12	-403.58E-6	8.0717E-9
33	24.BLR.9	-72.70462	-33.54538	106.80000	-0.05789	106.78	-58.230E-12	-407.62E-6	8.1524E-9
33	24.BLR.9	-72.28577	-33.80923	106.80000	-0.05947	106.78	-59.215E-12	-411.67E-6	8.2334E-9
33	24.BLR.9	-71.86692	-34.07308	106.80000	-0.06106	106.78	-60.207E-12	-415.74E-6	8.3147E-9
33	24.BLR.9	-71.44808	-34.33692	106.80000	-0.06267	106.78	-61.214E-12	-419.82E-6	8.3963E-9
33	24.BLR.9	-71.02923	-34.60077	106.80000	-0.06430	106.78	-62.231E-12	-423.91E-6	8.4782E-9
33	24.BLR.9	-70.61038	-34.86462	106.80000	-0.06594	106.78	-63.256E-12	-428.02E-6	8.5603E-9
33	24.BLR.9	-70.19154	-35.12846	106.80000	-0.06769	106.78	-64.292E-12	-432.13E-6	8.6426E-9
33	24.BLR.9	-69.77269	-35.39231	106.80000	-0.06926	106.78	-65.338E-12	-436.26E-6	8.7252E-9
33	24.BLR.9	-69.35385	-35.65615	106.80000	-0.07094	106.78	-66.395E-12	-440.39E-6	8.8079E-9
33	24.BLR.9	-68.93500	-35.92000	106.80000	-0.07264	106.78	-67.462E-12	-444.54E-6	8.8907E-9
33	24.BLR.9	-68.51615	-36.18385	106.80000	-0.07435	106.78	-68.534E-12	-448.68E-6	8.9737E-9
33	24.BLR.9	-68.09731	-36.44769	106.80000	-0.07607	106.78	-69.610E-12	-452.84E-6	9.0568E-9
33	24.BLR.9	-67.67846	-36.71154	106.80000	-0.07780	106.78	-70.711E-12	-457.00E-6	9.1399E-9
33	24.BLR.9	-67.25962	-36.97538	106.80000	-0.07955	106.78	-71.809E-12	-461.15E-6	9.2231E-9
33	24.BLR.9	-66.84077	-37.23923	106.80000	-0.08130	106.78	-72.916E-12	-465.31E-6	9.3063E-9
33	24.BLR.9	-66.42192	-37.50308	106.80000	-0.08307	106.78	-74.029E-12	-469.47E-6	9.3895E-9
33	24.BLR.9	-66.00308	-37.76692	106.80000	-0.08486	106.78	-75.145E-12	-473.63E-6	9.4726E-9
33	24.BLR.9	-65.58423	-38.03077	106.80000	-0.08662	106.78	-76.278E-12	-477.79E-6	9.5557E-9
33	24.BLR.9	-65.16538	-38.29462	106.80000	-0.08841	106.78	-77.415E-12	-481.93E-6	9.6387E-9
33	24.BLR.9	-64.74654	-38.55846	106.80000	-0.09021	106.78	-78.556E-12	-486.08E-6	9.7215E-9
33	24.BLR.9	-64.32769	-38.82231	106.80000	-0.09201	106.78	-79.700E-12	-490.21E-6	9.8042E-9
33	24.BLR.9	-63.90885	-39.08615	106.80000	-0.09382	106.78	-80.850E-12	-494.33E-6	9.8867E-9
33	24.BLR.9	-63.49000	-39.35000	106.80000	-0.09564	106.78	-82.004E-12	-498.45E-6	9.9689E-9
34	24.BLR.10	-67.55000	-21.64000	106.80000	-0.12933	106.78	-117.73E-12	-616.62E-6	12.332E-9
34	24.BLR.10	-67.81269	-22.05731	106.80000	-0.12541	106.78	-114.12E-12	-605.48E-6	12.110E-9
34	24.BLR.10	-68.07538	-22.47462	106.80000	-0.12158	106.78	-110.64E-12	-594.58E-6	11.892E-9
34	24.BLR.10	-67.83846	-22.99192	106.80000	-0.11783	106.78	-107.27E-12	-583.85E-6	11.678E-9
34	24.BLR.10	-68.60077	-23.30923	106.80000	-0.11416	106.78	-104.02E-12	-573.47E-6	11.469E-9
34	24.BLR.10	-68.86346	-23.72654	106.80000	-0.11058	106.78	-100.87E-12	-563.25E-6	11.265E-9
34	24.BLR.10	-69.12615	-24.14385	106.80000	-0.10707	106.78	-97.840E-12	-553.24E-6	11.065E-9
34	24.BLR.10	-69.38885	-24.56115	106.80000	-0.10364	106.78	-94.906E-12	-543.44E-6	10.869E-9
34	24.BLR.10	-69.65154	-24.97846	106.80000	-0.10029	106.78	-92.073E-12	-533.67E-6	10.677E-9
34	24.BLR.10	-69.91423	-25.39577	106.80000	-0.09701	106.78	-89.335E-12	-524.46E-6	10.489E-9
34	24.BLR.10	-70.17692	-25.81308	106.80000	-0.09381	106.78	-86.684E-12	-515.27E-6	10.305E-9
34	24.BLR.10	-70.43962	-26.23038	106.80000	-0.09069	106.78	-84.126E-12	-506.27E-6	10.125E-9
34	24.BLR.10	-70.70231	-26.64769	106.80000	-0.08763	106.78	-81.651E-12	-497.46E-6	9.9492E-9
34	24.BLR.10	-70.96500	-27.06500	106.80000	-0.08463	106.78	-79.259E-12	-488.93E-6	9.7765E-9
34	24.BLR.10	-71.22769	-27.48231	106.80000	-0.08173	106.78	-76.943E-12	-480.38E-6	9.6076E-9
34	24.BLR.10	-71.49038	-27.89962	106.80000	-0.07889	106.78	-74.706E-12	-472.11E-6	9.4421E-9
34	24.BLR.10	-71.75308	-28.31692	106.80000	-0.07611	106.78	-72.542E-12	-464.00E-6	9.2801E-9
34	24.BLR.10	-72.01577	-28.73423	106.80000	-0.07340	106.78	-70.452E-12	-456.07E-6	9.1214E-9
34	24.BLR.10	-72.27846	-29.15154	106.80000	-0.07075	106.78	-68.425E-12	-448.39E-6	8.9659E-9
34	24.BLR.10	-72.54115	-29.56885	106.80000	-0.06817	106.78	-66.455E-12	-440.69E-6	8.8137E-9
34	24.BLR.10	-72.80385	-29.98615	106.80000	-0.06564	106.78	-64.566E-12	-433.23E-6	8.6646E-9
34	24.BLR.10	-73.06654	-30.40346	106.80000	-0.06318	106.78	-62.732E-12	-425.93E-6	8.5185E-9
34	24.BLR.10	-73.32923	-30.82077	106.80000	-0.06078	106.78	-60.957E-12	-418.77E-6	8.3755E-9
34	24.BLR.10	-73.59192	-31.23808	106.80000	-0.05844	106.78	-59.237E-12	-411.76E-6	8.2353E-9
34	24.BLR.10	-73.85462	-31.65538	106.80000	-0.05616	106.78	-57.573E-12	-404.90E-6	8.0980E-9
34	24.BLR.10	-74.11731	-32.07269	106.80000	-0.05393	106.78	-55.963E-12	-398.17E-6	7.9635E-9
34	24.BLR.10	-74.38000	-32.49000	106.80000	-0.05176	106.78	-54.402E-12	-391.58E-6	7.8317E-9
35	24.BLR.11	-65.43000	-22.97000	106.80000	-0.14780	106.78	-132.23E-12	-660.31E-6	13.206E-9
35	24.BLR.11	-65.88923	-22.74823	106.80000	-0.14461	106.78	-129.71E-12	-652.87E-6	13.057E-9
35	24.BLR.11	-66.13667	-22.52667	106.80000	-0.14147	106.78	-127.24E-12	-645.50E-6	12.910E-9
35	24.BLR.11	-66.49000	-22.30500	106.80000	-0.13837	106.78	-124.80E-12	-638.18E-6	12.764E-9
35	24.BLR.11								



Highgate Junior School Sports Hall
Unloading and Loading Long Term

Job No.	Sheet No.	Rev.
3244		
Drg. Ref.		
Made by AC	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level [mOD]	Stress: Vertical [kN/m ²]	Stress: Sum Princ. [kN/m ²]	Vert. Strain [µ]
		[m]	[m]	[mOD]	[mm]				
37	24.BLR.13	-62.99040	-16.97800	106.80000	-0.21907	106.78	-208.295E-12	-860.555E-6	17.211E-9
37	24.BLR.13	-62.15360	-17.44200	106.80000	-0.21450	106.78	-202.66E-12	-847.00E-6	16.940E-9
37	24.BLR.13	-62.31680	-17.90600	106.80000	-0.20998	106.78	-197.18E-12	-833.64E-6	16.673E-9
37	24.BLR.13	-62.48000	-18.37000	106.80000	-0.20550	106.78	-191.84E-12	-820.47E-6	16.409E-9
38	FR.1	-24.98000	-52.40000	106.80000	-0.33089	106.78	-288.98E-12	-0.0010108	20.215E-9
38	FR.1	-14.49968	-52.72825	106.80000	-0.33832	106.78	-297.70E-12	-0.0010276	20.551E-9
38	FR.1	-24.01937	-52.15651	106.80000	-0.34584	106.78	-306.66E-12	-0.0010446	20.891E-9
38	FR.1	-23.53905	-52.03476	106.80000	-0.35343	106.78	-315.88E-12	-0.0010618	21.236E-9
38	FR.1	-23.05873	-51.91302	106.80000	-0.36111	106.78	-325.36E-12	-0.0010793	21.586E-9
38	FR.1	-22.57841	-51.79127	106.80000	-0.36886	106.78	-335.10E-12	-0.0010970	21.939E-9
38	FR.1	-22.09810	-51.66952	106.80000	-0.37668	106.78	-345.10E-12	-0.0011149	22.297E-9
38	FR.1	-21.61778	-51.54778	106.80000	-0.38457	106.78	-355.37E-12	-0.0011330	22.659E-9
38	FR.1	-21.13746	-51.42603	106.80000	-0.39253	106.78	-365.90E-12	-0.0011513	23.026E-9
38	FR.1	-20.65714	-51.30429	106.80000	-0.40055	106.78	-376.72E-12	-0.0011698	23.396E-9
38	FR.1	-20.17683	-51.18254	106.80000	-0.40863	106.78	-387.80E-12	-0.0011885	23.771E-9
38	FR.1	-19.69651	-51.06079	106.80000	-0.41676	106.78	-399.17E-12	-0.0012074	24.149E-9
38	FR.1	-19.21619	-50.93905	106.80000	-0.42495	106.78	-410.81E-12	-0.0012265	24.531E-9
38	FR.1	-18.73587	-50.81730	106.80000	-0.43318	106.78	-422.72E-12	-0.0012458	24.916E-9
38	FR.1	-18.25556	-50.69556	106.80000	-0.44146	106.78	-434.92E-12	-0.0012652	25.305E-9
38	FR.1	-17.77524	-50.57381	106.80000	-0.44978	106.78	-447.39E-12	-0.0012848	25.697E-9
38	FR.1	-17.29492	-50.45206	106.80000	-0.45813	106.78	-460.13E-12	-0.0013046	26.091E-9
38	FR.1	-16.81460	-50.33032	106.80000	-0.46651	106.78	-473.14E-12	-0.0013244	26.489E-9
38	FR.1	-16.33429	-50.20857	106.80000	-0.47491	106.78	-486.42E-12	-0.0013444	26.889E-9
38	FR.1	-15.85397	-50.08683	106.80000	-0.48333	106.78	-499.97E-12	-0.0013646	27.291E-9
38	FR.1	-15.37365	-49.96508	106.80000	-0.49177	106.78	-513.76E-12	-0.0013848	27.695E-9
38	FR.1	-14.89333	-49.84333	106.80000	-0.50021	106.78	-527.81E-12	-0.0014051	28.115E-9
38	FR.1	-14.41302	-49.72159	106.80000	-0.50866	106.78	-542.10E-12	-0.0014254	28.508E-9
38	FR.1	-13.93270	-49.59984	106.80000	-0.51710	106.78	-556.62E-12	-0.0014458	28.917E-9
38	FR.1	-13.45238	-49.47810	106.80000	-0.52554	106.78	-571.36E-12	-0.0014663	29.326E-9
38	FR.1	-12.97206	-49.35635	106.80000	-0.53396	106.78	-586.31E-12	-0.0014868	29.735E-9
38	FR.1	-12.49175	-49.23460	106.80000	-0.54240	106.78	-601.46E-12	-0.0015072	30.144E-9
38	FR.1	-12.01143	-49.11286	106.80000	-0.55074	106.78	-616.78E-12	-0.0015277	30.553E-9
38	FR.1	-11.53111	-48.99111	106.80000	-0.55908	106.78	-632.27E-12	-0.0015481	30.962E-9
38	FR.1	-11.05079	-48.86937	106.80000	-0.56738	106.78	-647.90E-12	-0.0015684	31.368E-9
38	FR.1	-10.57048	-48.74762	106.80000	-0.57563	106.78	-663.66E-12	-0.0015887	31.774E-9
38	FR.1	-10.09016	-48.62587	106.80000	-0.58393	106.78	-679.53E-12	-0.0016091	32.176E-9
38	FR.1	-9.60984	-48.50413	106.80000	-0.59197	106.78	-695.47E-12	-0.0016288	32.577E-9
38	FR.1	-9.12952	-48.38238	106.80000	-0.60005	106.78	-711.48E-12	-0.0016487	32.974E-9
38	FR.1	-8.64921	-48.26063	106.80000	-0.60805	106.78	-727.51E-12	-0.0016684	33.367E-9
38	FR.1	-8.16889	-48.13889	106.80000	-0.61597	106.78	-743.55E-12	-0.0016878	33.756E-9
38	FR.1	-7.68857	-48.01714	106.80000	-0.62381	106.78	-759.56E-12	-0.0017074	34.140E-9
38	FR.1	-7.20825	-47.89540	106.80000	-0.63155	106.78	-775.52E-12	-0.0017260	34.519E-9
38	FR.1	-6.72794	-47.77365	106.80000	-0.63919	106.78	-791.39E-12	-0.0017446	34.892E-9
38	FR.1	-6.24762	-47.65190	106.80000	-0.64672	106.78	-807.13E-12	-0.0017629	35.258E-9
38	FR.1	-5.76730	-47.53016	106.80000	-0.65414	106.78	-822.72E-12	-0.0017809	35.617E-9
38	FR.1	-5.28698	-47.40841	106.80000	-0.66156	106.78	-838.12E-12	-0.0017989	35.969E-9
38	FR.1	-4.80667	-47.28667	106.80000	-0.66860	106.78	-853.29E-12	-0.0018156	36.312E-9
38	FR.1	-4.32635	-47.16492	106.80000	-0.67563	106.78	-868.19E-12	-0.0018323	36.646E-9
38	FR.1	-3.84603	-47.04317	106.80000	-0.68251	106.78	-882.79E-12	-0.0018485	36.971E-9
38	FR.1	-3.36571	-46.92143	106.80000	-0.68925	106.78	-897.04E-12	-0.0018643	37.285E-9
38	FR.1	-2.88540	-46.79968	106.80000	-0.69583	106.78	-910.24E-12	-0.0018794	37.589E-9
38	FR.1	-2.40508	-46.67794	106.80000	-0.70225	106.78	-924.36E-12	-0.0018940	37.881E-9
38	FR.1	-1.92476	-46.55619	106.80000	-0.70849	106.78	-937.34E-12	-0.0019081	38.161E-9
38	FR.1	-1.44444	-46.43444	106.80000	-0.71456	106.78	-949.83E-12	-0.0019214	38.429E-9
38	FR.1	-0.96413	-46.31270	106.80000	-0.72045	106.78	-961.77E-12	-0.0019342	38.683E-9
38	FR.1	-0.48381	-46.19095	106.80000	-0.72614	106.78	-973.14E-12	-0.0019462	38.929E-9
38	FR.1	-0.00349	-46.06921	106.80000	-0.73164	106.78	-983.88E-12	-0.0019576	39.151E-9
38	FR.1	0.47683	-45.94746	106.80000	-0.73694	106.78	-993.98E-12	-0.0019682	39.363E-9
38	FR.1	0.95714	-45.82571	106.80000	-0.74203	106.78	-1.0034E-9	-0.0019780	39.561E-9
38	FR.1	1.43746	-45.70397	106.80000	-0.74691	106.78	-1.0121E-9	-0.0019871	39.742E-9
38	FR.1	1.91778	-45.58222	106.80000	-0.75156	106.78	-1.0200E-9	-0.0019959	39.907E-9
38	FR.1	2.39810	-45.46048	106.80000	-0.75599	106.78	-1.0272E-9	-0.0020028	40.057E-9
38	FR.1	2.87841	-45.33873	106.80000	-0.76019	106.78	-1.0336E-9	-0.0020094	40.189E-9
38	FR.1	3.35873	-45.21698	106.80000	-0.76416	106.78	-1.0391E-9	-0.0020152	40.304E-9
38	FR.1	3.83905	-45.09524	106.80000	-0.76788	106.78	-1.0438E-9	-0.0020201	40.402E-9
38	FR.1	4.31937	-44.97349	106.80000	-0.77137	106.78	-1.0476E-9	-0.0020241	40.483E-9
38	FR.1	4.79968	-44.85175	106.80000	-0.77460	106.78	-1.0506E-9	-0.0020273	40.545E-9
38	FR.1	5.28000	-44.73000	106.80000	-0.77758	106.78	-1.0526E-9	-0.0020295	40.590E-9
38	FR.2	5.28000	-44.73000	106.80000	-0.77758	106.78	-1.0526E-9	-0.0020295	40.590E-9
38	FR.2	5.39083	-45.18083	106.80000	-0.75018	106.78	-988.24E-12	-0.0019609	39.217E-9
38	FR.2	5.6267	-45.63167	106.80000	-0.72382	106.78	-928.70E-12	-0.0019297	37.908E-9
38	FR.2	5.61250	-46.08250	106.80000	-0.69844	106.78	-873.55E-12	-0.0018330	36.659E-9
38	FR.2	5.72333	-46.53333	106.80000	-0.67401	106.78	-822.41E-12	-0.0017733	35.467E-9
38	FR.2	5.83417	-46.98417	106.80000	-0.65049	106.78	-774.94E-12	-0.0017164	34.328E-9
38	FR.2	5.94500	-47.43500	106.80000	-0.62783	106.78	-730.82E-12	-0.0016619	33.239E-9
38	FR.2	6.05583	-47.88583	106.80000	-0.60620	106.78	-689.77E-12	-0.0016059	32.197E-9
38	FR.2	6.16667	-48.33667	106.80000	-0.58496	106.78	-651.55E-12	-0.0015600	31.201E-9
38	FR.2	6.27750	-48.78750	106.80000	-0.56468	106.78	-615.92E-12	-0.0015123	30.247E-9
38	FR.2	6.38833	-49.23833	106.80000	-0.54513	106.78	-582.67E-12	-0.0014666	29.332E-9
38	FR.2	6.49917	-49.68917	106.80000	-0.52628	106.78	-551.62E-12	-0.0014228	28.456E-9
40	FR.3	6.61000	-50.14000	106.80000	-0.50810	106.78	-522.59E-12	-0.0013801	27.615E-9
40	FR.3	6.14286	-50.25429	106.80000	-0.50656	106.78	-522.07E-12	-0.0013799	27.599E-9
40	FR.3	5.67571	-50.36857	106.80000	-0.50487	106.78	-521.26E-12	-0.0013787	27.574E-9
40	FR.3	5.20857	-50.48286	106.80000	-0.50304	106.78	-520.13E-12	-0.0013770	27.540E-9
40	FR.3	4.74143	-50.59714	106.80000	-0.50107	106.78	-518.71E-12	-0.0013747	27.498E-9
40	FR.3	4.27429	-50.71143	106.80000	-0.49897	106.78	-516.99E-12	-0.0013724	27.448E-9
40	FR.3	3.80714	-50.82571	106.80000	-0.49674	106.78	-514.97E-12	-0.0013695	27.389E-9
40	FR.3	3.34000	-50.94000	106.80000	-0.49437	106.78	-512.67E-12	-0.0013661	27.322E-9
41	FR.4	3.34000	-50.94000	106.80000	-0.49437	106.78	-512.67E-12	-0.0013661	27.322E-9
41	FR.4	3.45286	-51.39286	106.80000	-0.47709	106.78	-485.76E-12	-0.0013298	26.516E-9
41	FR.4	3.56571	-51.85571	106.80000	-0.46042	106.78	-460.57E-12	-0.0012871	25.742E-9
41	FR.4	3.67857	-52.31786	106.80000	-0.44434	106.78	-436.98E-12	-0.0012499	24.998E-9
41	FR.4	3.79143	-52.77714	106.80000	-0.42883	106.78	-414.86E-12	-0.0012142	24.284E-9
41	FR.4	3.90429	-53.23643	106.80000	-0.41386	106.78	-394.11E-12	-0.0011799	23.598E-9
41	FR.4	4.01714	-53.69571	106.80000	-0.39940	106.78	-374.62E-12	-0.0011442	22.939E-9
41	FR.4	4.13000	-54.15500	106.80000	-0.38545	106.78	-356.30E-12	-0.0011152	22.303E-9
41									



Highgate Junior School Sports Hall
Unloading and Loading Long Term

Job No.	Sheet No.	Rev.
3244		
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Made by AC	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level [mOD]	Stress: Vertical [kN/m ²]	Stress: Sum Princ. [kN/m ²]	Vert. Strain [µ]
		[m]	[m]	[mOD]	[mm]				
42	FH.5	-7.62500	-60.53643	106.80000	-0.24031	106.78	-199.765E-12	-807.399E-6	16.148E-9
42	FH.5	-8.10750	-60.65821	106.80000	-0.23738	106.78	-196.93E-12	-801.04E-6	16.021E-9
42	FH.5	-8.59000	-60.78000	106.80000	-0.23442	106.78	-194.08E-12	-794.61E-6	15.892E-9
42	FH.5	-9.07250	-60.90179	106.80000	-0.23143	106.78	-191.21E-12	-788.09E-6	15.762E-9
42	FH.5	-9.55500	-61.02357	106.80000	-0.22841	106.78	-188.33E-12	-781.49E-6	15.630E-9
42	FH.5	-10.03750	-61.14536	106.80000	-0.22538	106.78	-185.44E-12	-774.83E-6	15.497E-9
42	FH.5	-10.52000	-61.26714	106.80000	-0.22232	106.78	-182.55E-12	-768.10E-6	15.362E-9
42	FH.5	-11.00250	-61.38893	106.80000	-0.21925	106.78	-179.65E-12	-761.31E-6	15.226E-9
42	FH.5	-11.48500	-61.51071	106.80000	-0.21616	106.78	-176.75E-12	-754.47E-6	15.089E-9
42	FH.5	-11.96750	-61.63250	106.80000	-0.21306	106.78	-173.85E-12	-747.57E-6	14.951E-9
42	FH.5	-12.45000	-61.75429	106.80000	-0.20994	106.78	-170.96E-12	-740.64E-6	14.813E-9
42	FH.5	-12.93250	-61.87607	106.80000	-0.20682	106.78	-168.08E-12	-733.66E-6	14.673E-9
42	FH.5	-13.41500	-61.99786	106.80000	-0.20369	106.78	-165.21E-12	-726.65E-6	14.533E-9
42	FH.5	-13.89750	-62.11964	106.80000	-0.20054	106.78	-162.34E-12	-719.61E-6	14.392E-9
42	FH.5	-14.38000	-62.24143	106.80000	-0.19740	106.78	-159.49E-12	-712.55E-6	14.251E-9
42	FH.5	-14.86250	-62.36321	106.80000	-0.19425	106.78	-156.66E-12	-705.46E-6	14.109E-9
42	FH.5	-15.34500	-62.48500	106.80000	-0.19110	106.78	-153.84E-12	-698.36E-6	13.967E-9
42	FH.5	-15.82750	-62.60679	106.80000	-0.18795	106.78	-151.05E-12	-691.24E-6	13.825E-9
42	FH.5	-16.31000	-62.72857	106.80000	-0.18480	106.78	-148.28E-12	-684.12E-6	13.682E-9
42	FH.5	-16.79250	-62.85036	106.80000	-0.18166	106.78	-145.52E-12	-677.00E-6	13.540E-9
42	FH.5	-17.27500	-62.97214	106.80000	-0.17852	106.78	-142.80E-12	-669.87E-6	13.397E-9
42	FH.5	-17.75750	-63.09393	106.80000	-0.17539	106.78	-140.10E-12	-662.75E-6	13.255E-9
42	FH.5	-18.24000	-63.21571	106.80000	-0.17226	106.78	-137.43E-12	-655.63E-6	13.113E-9
42	FH.5	-18.72250	-63.33750	106.80000	-0.16915	106.78	-134.78E-12	-648.53E-6	12.971E-9
42	FH.5	-19.20500	-63.45929	106.80000	-0.16605	106.78	-132.17E-12	-641.44E-6	12.829E-9
42	FH.5	-19.68750	-63.58107	106.80000	-0.16293	106.78	-129.59E-12	-634.37E-6	12.687E-9
42	FH.5	-20.17000	-63.70286	106.80000	-0.15988	106.78	-127.04E-12	-627.31E-6	12.546E-9
42	FH.5	-20.65250	-63.82464	106.80000	-0.15682	106.78	-124.52E-12	-620.28E-6	12.406E-9
42	FH.5	-21.13500	-63.94643	106.80000	-0.15377	106.78	-122.03E-12	-613.28E-6	12.266E-9
42	FH.5	-21.61750	-64.06821	106.80000	-0.15074	106.78	-119.58E-12	-606.30E-6	12.126E-9
42	FH.5	-22.10000	-64.19000	106.80000	-0.14773	106.78	-117.16E-12	-599.36E-6	11.987E-9
43	FH.6	-22.11520	-64.19000	106.80000	-0.14773	106.78	-117.16E-12	-599.36E-6	11.987E-9
43	FH.6	-22.21520	-63.71840	106.80000	-0.15290	106.78	-121.23E-12	-611.33E-6	12.227E-9
43	FH.6	-22.33040	-63.24680	106.80000	-0.15821	106.78	-125.45E-12	-623.60E-6	12.472E-9
43	FH.6	-22.44560	-62.77520	106.80000	-0.16367	106.78	-129.84E-12	-636.18E-6	12.724E-9
43	FH.6	-22.56080	-62.30360	106.80000	-0.16929	106.78	-134.37E-12	-649.03E-6	12.972E-9
43	FH.6	-22.67600	-61.83200	106.80000	-0.17506	106.78	-139.17E-12	-662.30E-6	13.246E-9
43	FH.6	-22.79120	-61.36040	106.80000	-0.18099	106.78	-144.12E-12	-675.85E-6	13.517E-9
43	FH.6	-22.90640	-60.88880	106.80000	-0.18709	106.78	-149.27E-12	-689.74E-6	13.795E-9
43	FH.6	-23.02160	-60.41720	106.80000	-0.19336	106.78	-154.63E-12	-703.99E-6	14.080E-9
43	FH.6	-23.13680	-59.94560	106.80000	-0.19980	106.78	-160.21E-12	-718.60E-6	14.372E-9
43	FH.6	-23.25200	-59.47400	106.80000	-0.20643	106.78	-166.02E-12	-733.58E-6	14.672E-9
43	FH.6	-23.36720	-59.00240	106.80000	-0.21324	106.78	-172.07E-12	-748.94E-6	14.979E-9
43	FH.6	-23.48240	-58.53080	106.80000	-0.22023	106.78	-178.37E-12	-764.70E-6	15.294E-9
43	FH.6	-23.59760	-58.05920	106.80000	-0.22742	106.78	-184.93E-12	-780.86E-6	15.617E-9
43	FH.6	-23.71280	-57.58760	106.80000	-0.23481	106.78	-191.76E-12	-797.44E-6	15.949E-9
43	FH.6	-23.82800	-57.11600	106.80000	-0.24241	106.78	-198.89E-12	-814.44E-6	16.289E-9
43	FH.6	-23.94320	-56.64440	106.80000	-0.25022	106.78	-206.31E-12	-831.88E-6	16.638E-9
43	FH.6	-24.05840	-56.17280	106.80000	-0.25824	106.78	-214.05E-12	-849.78E-6	16.996E-9
43	FH.6	-24.17360	-55.70120	106.80000	-0.26648	106.78	-222.11E-12	-868.14E-6	17.363E-9
43	FH.6	-24.28880	-55.22960	106.80000	-0.27495	106.78	-230.51E-12	-886.98E-6	17.739E-9
43	FH.6	-24.40400	-54.75800	106.80000	-0.28366	106.78	-239.26E-12	-906.30E-6	18.126E-9
43	FH.6	-24.51920	-54.28640	106.80000	-0.29260	106.78	-248.39E-12	-926.13E-6	18.523E-9
43	FH.6	-24.63440	-53.81480	106.80000	-0.30179	106.78	-257.91E-12	-946.48E-6	18.930E-9
43	FH.6	-24.74960	-53.34320	106.80000	-0.31123	106.78	-267.84E-12	-967.36E-6	19.347E-9
43	FH.6	-24.86480	-52.87160	106.80000	-0.32093	106.78	-278.19E-12	-988.70E-6	19.776E-9
43	FH.6	-24.98000	-52.40000	106.80000	-0.33089	106.78	-288.98E-12	-1010.00E-6	20.215E-9
44	PP.Sch.1	27.17000	-40.03000	106.80000	-0.61232	106.78	-493.27E-12	-0.0013633	27.267E-9
44	PP.Sch.1	27.64893	-39.93143	106.80000	-0.60485	106.78	-480.01E-12	-0.0013434	26.869E-9
44	PP.Sch.1	28.12786	-39.83286	106.80000	-0.59734	106.78	-467.02E-12	-0.0013236	26.473E-9
44	PP.Sch.1	28.60679	-39.73429	106.80000	-0.58981	106.78	-454.30E-12	-0.0013046	26.080E-9
44	PP.Sch.1	29.08571	-39.63571	106.80000	-0.58225	106.78	-441.86E-12	-0.0012845	25.690E-9
44	PP.Sch.1	29.56464	-39.53714	106.80000	-0.57469	106.78	-429.70E-12	-0.0012651	25.302E-9
44	PP.Sch.1	30.04357	-39.43857	106.80000	-0.56713	106.78	-417.81E-12	-0.0012459	24.919E-9
44	PP.Sch.1	30.52250	-39.34000	106.80000	-0.55957	106.78	-406.20E-12	-0.0012269	24.538E-9
44	PP.Sch.1	31.00143	-39.24143	106.80000	-0.55203	106.78	-394.87E-12	-0.0012081	24.161E-9
44	PP.Sch.1	31.48036	-39.14286	106.80000	-0.54452	106.78	-383.80E-12	-0.0011894	23.788E-9
44	PP.Sch.1	31.95929	-39.04429	106.80000	-0.53704	106.78	-373.02E-12	-0.0011709	23.419E-9
44	PP.Sch.1	32.43821	-38.94571	106.80000	-0.52960	106.78	-362.50E-12	-0.0011527	23.053E-9
44	PP.Sch.1	32.91714	-38.84714	106.80000	-0.52221	106.78	-352.24E-12	-0.0011346	22.692E-9
44	PP.Sch.1	33.39607	-38.74857	106.80000	-0.51489	106.78	-342.25E-12	-0.0011167	22.335E-9
44	PP.Sch.1	33.87500	-38.65000	106.80000	-0.50761	106.78	-332.52E-12	-0.0010991	21.981E-9
44	PP.Sch.1	34.35393	-38.55143	106.80000	-0.50042	106.78	-323.05E-12	-0.0010816	21.633E-9
44	PP.Sch.1	34.83286	-38.45286	106.80000	-0.49331	106.78	-313.83E-12	-0.0010644	21.288E-9
44	PP.Sch.1	35.31179	-38.35429	106.80000	-0.48628	106.78	-304.85E-12	-0.0010474	20.948E-9
44	PP.Sch.1	35.79071	-38.25571	106.80000	-0.47936	106.78	-296.12E-12	-0.0010306	20.613E-9
44	PP.Sch.1	36.26964	-38.15714	106.80000	-0.47254	106.78	-287.64E-12	-0.0010140	20.281E-9
44	PP.Sch.1	36.74857	-38.05857	106.80000	-0.46582	106.78	-279.38E-12	-997.69E-6	19.954E-9
44	PP.Sch.1	37.22750	-37.96000	106.80000	-0.45923	106.78	-271.35E-12	-981.57E-6	19.631E-9
44	PP.Sch.1	37.70643	-37.86143	106.80000	-0.45275	106.78	-263.55E-12	-965.68E-6	19.313E-9
44	PP.Sch.1	38.18536	-37.76286	106.80000	-0.44641	106.78	-256.97E-12	-950.00E-6	19.002E-9
44	PP.Sch.1	38.66429	-37.66429	106.80000	-0.44020	106.78	-249.60E-12	-934.57E-6	18.691E-9
44	PP.Sch.1	39.14321	-37.56571	106.80000	-0.43413	106.78	-241.44E-12	-919.35E-6	18.387E-9
44	PP.Sch.1	39.62214	-37.46714	106.80000	-0.42821	106.78	-234.49E-12	-904.36E-6	18.087E-9
44	PP.Sch.1	40.10107	-37.36857	106.80000	-0.42243	106.78	-227.74E-12	-889.60E-6	17.792E-9
44	PP.Sch.1	40.57999	-37.27000	106.80000	-0.41680	106.78	-222.05E-12	-875.05E-6	17.501E-9
45	PP.Sch.2	29.53000	-51.47000	106.80000	-0.26757	106.78	-174.75E-12	-752.74E-6	15.055E-9
45	PP.Sch.2	29.43167	-50.99333	106.80000	-0.27709	106.78	-181.82E-12	-770.14E-6	15.403E-9
45	PP.Sch.2	29.33333	-50.51667	106.80000	-0.28692	106.78	-189.24E-12	-788.06E-6	15.761E-9
45	PP.Sch.2	29.23500	-50.04000	106.80000	-0.29708	106.78	-197.02E-12	-806.52E-6	16.130E-9
45	PP.Sch.2	29.13667	-49.56333	106.80000	-0.30751	106.78	-205.18E-12	-825.55E-6	16.515E-9
45	PP.Sch.2	29.03833	-49.08667	106.80000	-0.31841	106.78	-213.74E-12	-845.15E-6	16.903E-9
45	PP.Sch.2	28.94000	-48.61000	106.80000	-0.32962	106.78	-222.72E-12	-865.37E-6	17.307E-9
45	PP.Sch.2	28.84167	-48.13333	106.80000	-0.34120	106.78	-232.15E-12	-886.21E-6	17.724E-9
45	PP.Sch.2	28.74333	-47.65667	106.80000	-0.35316	106.78	-242.06E-12	-907.70E-6	18.154E-9

Oasys						Job No.	Sheet No.	Rev.	
Highgate Junior School Sports Hall						3244			
Unloading and Loading Long Term						Drg. Ref.			
						Made by AC	Date	Checked	
Ref.	Name	x	y	z	δz	Stress: Calc. Level [mOD]	Stress: Vertical [kN/m²]	Stress: Sum Princ. [kN/m²]	Vert. Strain [µ]
		[m]	[m]	[mOD]	[mm]				
46	PP.Sch.3	42.44042	-46.32667	106.80000	-0.23685	106.78	-118.27E-12	-606.63E-6	12.133E-9
46	PP.Sch.3	42.53833	-46.80333	106.80000	-0.22958	106.78	-114.56E-12	-595.40E-6	11.908E-9
46	PP.Sch.3	42.63625	-47.28000	106.80000	-0.22249	106.78	-110.97E-12	-584.42E-6	11.688E-9
46	PP.Sch.3	42.73417	-47.75667	106.80000	-0.21558	106.78	-107.51E-12	-573.69E-6	11.474E-9
46	PP.Sch.3	42.83208	-48.23333	106.80000	-0.20884	106.78	-104.17E-12	-563.18E-6	11.264E-9
46	PP.Sch.3	42.93000	-48.71000	106.80000	-0.20228	106.78	-100.95E-12	-552.91E-6	11.058E-9
47	PP.Sch.4	42.93000	-48.71000	106.80000	-0.20228	106.78	-100.95E-12	-552.91E-6	11.058E-9
47	PP.Sch.4	42.45143	-48.80857	106.80000	-0.20423	106.78	-103.11E-12	-559.61E-6	11.192E-9
47	PP.Sch.4	41.97286	-48.90714	106.80000	-0.20622	106.78	-105.31E-12	-566.36E-6	11.327E-9
47	PP.Sch.4	41.49429	-49.00571	106.80000	-0.20826	106.78	-107.54E-12	-573.17E-6	11.463E-9
47	PP.Sch.4	41.01571	-49.10429	106.80000	-0.21034	106.78	-109.82E-12	-580.02E-6	11.600E-9
47	PP.Sch.4	40.53714	-49.20286	106.80000	-0.21246	106.78	-112.13E-12	-586.91E-6	11.738E-9
47	PP.Sch.4	40.05857	-49.30143	106.80000	-0.21463	106.78	-114.48E-12	-593.85E-6	11.877E-9
47	PP.Sch.4	39.58000	-49.40000	106.80000	-0.21683	106.78	-116.87E-12	-600.84E-6	12.017E-9
47	PP.Sch.4	39.10143	-49.49857	106.80000	-0.21906	106.78	-119.30E-12	-607.86E-6	12.157E-9
47	PP.Sch.4	38.62286	-49.59714	106.80000	-0.22133	106.78	-121.76E-12	-614.92E-6	12.298E-9
47	PP.Sch.4	38.14429	-49.69571	106.80000	-0.22363	106.78	-124.26E-12	-622.01E-6	12.440E-9
47	PP.Sch.4	37.66571	-49.79429	106.80000	-0.22596	106.78	-126.79E-12	-629.14E-6	12.583E-9
47	PP.Sch.4	37.18714	-49.89286	106.80000	-0.22832	106.78	-129.37E-12	-636.31E-6	12.726E-9
47	PP.Sch.4	36.70857	-49.99143	106.80000	-0.23070	106.78	-131.98E-12	-643.50E-6	12.870E-9
47	PP.Sch.4	36.23000	-50.09000	106.80000	-0.23310	106.78	-134.62E-12	-650.71E-6	13.014E-9
47	PP.Sch.4	35.75143	-50.18857	106.80000	-0.23552	106.78	-137.30E-12	-657.95E-6	13.159E-9
47	PP.Sch.4	35.27286	-50.28714	106.80000	-0.23795	106.78	-140.01E-12	-665.22E-6	13.304E-9
47	PP.Sch.4	34.79429	-50.38571	106.80000	-0.24041	106.78	-142.76E-12	-672.49E-6	13.450E-9
47	PP.Sch.4	34.31571	-50.48429	106.80000	-0.24287	106.78	-145.53E-12	-679.79E-6	13.596E-9
47	PP.Sch.4	33.83714	-50.58286	106.80000	-0.24534	106.78	-148.34E-12	-687.09E-6	13.742E-9
47	PP.Sch.4	33.35857	-50.68143	106.80000	-0.24782	106.78	-151.17E-12	-694.41E-6	13.888E-9
47	PP.Sch.4	32.88000	-50.78000	106.80000	-0.25030	106.78	-154.03E-12	-701.72E-6	14.034E-9
47	PP.Sch.4	32.40143	-50.87857	106.80000	-0.25278	106.78	-156.92E-12	-709.04E-6	14.181E-9
47	PP.Sch.4	31.92286	-50.97714	106.80000	-0.25527	106.78	-159.84E-12	-716.35E-6	14.327E-9
47	PP.Sch.4	31.44429	-51.07571	106.80000	-0.25775	106.78	-162.78E-12	-723.66E-6	14.473E-9
47	PP.Sch.4	30.96571	-51.17429	106.80000	-0.26022	106.78	-165.74E-12	-730.96E-6	14.619E-9
47	PP.Sch.4	30.48714	-51.27286	106.80000	-0.26268	106.78	-168.73E-12	-738.24E-6	14.765E-9
47	PP.Sch.4	30.00857	-51.37143	106.80000	-0.26513	106.78	-171.73E-12	-745.50E-6	14.910E-9
47	PP.Sch.4	29.53000	-51.47000	106.80000	-0.26757	106.78	-174.75E-12	-752.74E-6	15.055E-9
48	PP.Sch.5	29.05000	-51.56800	106.80000	-0.26549	106.78	-172.14E-12	-746.50E-6	14.930E-9
48	PP.Sch.5	30.02889	-51.84111	106.80000	-0.25680	106.78	-165.88E-12	-730.72E-6	14.614E-9
48	PP.Sch.5	30.10778	-52.30222	106.80000	-0.24836	106.78	-159.87E-12	-715.36E-6	14.307E-9
48	PP.Sch.5	30.18667	-52.76333	106.80000	-0.24018	106.78	-154.13E-12	-700.42E-6	14.008E-9
48	PP.Sch.5	30.26556	-53.22444	106.80000	-0.23223	106.78	-148.62E-12	-685.87E-6	13.717E-9
48	PP.Sch.5	30.34444	-53.68556	106.80000	-0.22453	106.78	-143.35E-12	-671.71E-6	13.434E-9
48	PP.Sch.5	30.42333	-54.14667	106.80000	-0.21705	106.78	-138.29E-12	-657.92E-6	13.158E-9
48	PP.Sch.5	30.50222	-54.60778	106.80000	-0.20979	106.78	-133.44E-12	-644.50E-6	12.890E-9
48	PP.Sch.5	30.58111	-55.06889	106.80000	-0.20274	106.78	-128.79E-12	-631.43E-6	12.628E-9
48	PP.Sch.5	30.66000	-55.53000	106.80000	-0.19591	106.78	-124.33E-12	-618.69E-6	12.374E-9
49	PP.Sch.6	43.37000	-55.92000	106.80000	-0.15322	106.78	-78.527E-12	-477.17E-6	9.5434E-9
49	PP.Sch.6	43.28444	-52.46000	106.80000	-0.15827	106.78	-80.846E-12	-485.37E-6	9.7074E-9
49	PP.Sch.6	43.19889	-52.00000	106.80000	-0.16346	106.78	-83.239E-12	-493.74E-6	9.8749E-9
49	PP.Sch.6	43.11333	-51.54000	106.80000	-0.16877	106.78	-85.715E-12	-502.29E-6	10.046E-9
49	PP.Sch.6	43.02778	-51.08000	106.80000	-0.17422	106.78	-88.274E-12	-511.02E-6	10.220E-9
49	PP.Sch.6	42.94222	-50.62000	106.80000	-0.17980	106.78	-90.919E-12	-519.93E-6	10.399E-9
49	PP.Sch.6	42.85667	-50.16000	106.80000	-0.18533	106.78	-93.652E-12	-529.03E-6	10.581E-9
49	PP.Sch.6	42.77111	-49.70000	106.80000	-0.19140	106.78	-96.477E-12	-538.32E-6	10.766E-9
49	PP.Sch.6	42.68556	-49.24000	106.80000	-0.19742	106.78	-99.398E-12	-547.80E-6	10.956E-9
49	PP.Sch.6	42.60000	-48.78000	106.80000	-0.20359	106.78	-102.42E-12	-557.49E-6	11.150E-9
50	PP.Sch.7	30.66000	-55.53000	106.80000	-0.19591	106.78	-124.33E-12	-618.69E-6	12.374E-9
50	PP.Sch.7	31.14885	-55.42962	106.80000	-0.19420	106.78	-122.40E-12	-613.32E-6	12.266E-9
50	PP.Sch.7	31.63769	-55.32923	106.80000	-0.19249	106.78	-120.49E-12	-607.93E-6	12.159E-9
50	PP.Sch.7	32.12654	-55.22885	106.80000	-0.19077	106.78	-118.58E-12	-602.51E-6	12.050E-9
50	PP.Sch.7	32.61538	-55.12846	106.80000	-0.18904	106.78	-116.67E-12	-597.06E-6	11.941E-9
50	PP.Sch.7	33.10423	-55.02808	106.80000	-0.18731	106.78	-114.78E-12	-591.60E-6	11.832E-9
50	PP.Sch.7	33.59308	-54.92769	106.80000	-0.18558	106.78	-112.89E-12	-586.12E-6	11.722E-9
50	PP.Sch.7	34.08192	-54.82731	106.80000	-0.18385	106.78	-111.02E-12	-580.63E-6	11.613E-9
50	PP.Sch.7	34.57077	-54.72692	106.80000	-0.18211	106.78	-109.15E-12	-575.13E-6	11.503E-9
50	PP.Sch.7	35.05962	-54.62654	106.80000	-0.18038	106.78	-107.30E-12	-569.62E-6	11.392E-9
50	PP.Sch.7	35.54846	-54.52615	106.80000	-0.17866	106.78	-105.47E-12	-564.11E-6	11.282E-9
50	PP.Sch.7	36.03731	-54.42577	106.80000	-0.17694	106.78	-103.65E-12	-558.60E-6	11.172E-9
50	PP.Sch.7	36.52615	-54.32538	106.80000	-0.17524	106.78	-101.84E-12	-553.08E-6	11.062E-9
50	PP.Sch.7	37.01500	-54.22500	106.80000	-0.17354	106.78	-100.05E-12	-547.57E-6	10.951E-9
50	PP.Sch.7	37.50385	-54.12462	106.80000	-0.17185	106.78	-98.281E-12	-542.07E-6	10.841E-9
50	PP.Sch.7	37.99269	-54.02423	106.80000	-0.17018	106.78	-96.525E-12	-536.57E-6	10.731E-9
50	PP.Sch.7	38.48154	-53.92385	106.80000	-0.16853	106.78	-94.790E-12	-531.08E-6	10.622E-9
50	PP.Sch.7	38.97038	-53.82346	106.80000	-0.16689	106.78	-93.072E-12	-525.61E-6	10.512E-9



Highgate Junior School Sports Hall
Unloading and Loading Long Term

Job No.	Sheet No.	Rev.
3244		
Drg. Ref.		
Made by AC	Date	Checked

Ref.	Name	x	y	z	δz	Stress: Calc. Level [mOD]	Stress: Vertical [kN/m ²]	Stress: Sum Princ. [kN/m ²]	Vert. Strain [µ]
		[m]	[m]	[mOD]	[mm]				
53	PP.Sch.10	43.99308	-58.02077	106.80000	-0.10817	106.78	-59.738E-12	-406.34E-6	8.1269E-9
53	PP.Sch.10	43.88154	-57.92038	106.80000	-0.10724	106.78	-58.739E-12	-402.44E-6	8.0488E-9
53	PP.Sch.10	44.37000	-57.82000	106.80000	-0.10632	106.78	-57.751E-12	-398.54E-6	7.9709E-9
54	GH.1	40.64000	-37.57000	106.80000	-0.40941	106.78	-216.56E-12	-864.29E-6	17.286E-9
54	GH.1	41.11045	-37.47682	106.80000	-0.40412	106.78	-210.44E-12	-850.41E-6	17.008E-9
54	GH.1	41.88091	-37.38364	106.80000	-0.39899	106.78	-204.50E-12	-836.74E-6	16.735E-9
54	GH.1	42.05136	-37.29045	106.80000	-0.39402	106.78	-198.73E-12	-823.29E-6	16.466E-9
54	GH.1	42.52182	-37.19727	106.80000	-0.38921	106.78	-193.13E-12	-810.04E-6	16.201E-9
54	GH.1	42.99227	-37.10409	106.80000	-0.38457	106.78	-187.69E-12	-797.00E-6	15.940E-9
54	GH.1	43.46273	-37.01091	106.80000	-0.38010	106.78	-182.40E-12	-784.17E-6	15.683E-9
54	GH.1	43.93318	-36.91773	106.80000	-0.37581	106.78	-177.28E-12	-771.55E-6	15.431E-9
54	GH.1	44.40364	-36.82455	106.80000	-0.37169	106.78	-172.30E-12	-759.12E-6	15.182E-9
54	GH.1	44.87409	-36.73136	106.80000	-0.36774	106.78	-167.46E-12	-746.90E-6	14.938E-9
54	GH.1	45.34455	-36.63818	106.80000	-0.36398	106.78	-162.77E-12	-734.88E-6	14.698E-9
54	GH.1	45.81500	-36.54500	106.80000	-0.36040	106.78	-158.21E-12	-723.06E-6	14.461E-9
54	GH.1	46.28545	-36.45282	106.80000	-0.35700	106.78	-153.79E-12	-711.43E-6	14.229E-9
54	GH.1	46.75591	-36.35864	106.80000	-0.35379	106.78	-149.50E-12	-700.00E-6	14.000E-9
54	GH.1	47.22636	-36.26545	106.80000	-0.35077	106.78	-145.33E-12	-688.75E-6	13.775E-9
54	GH.1	47.69682	-36.17227	106.80000	-0.34794	106.78	-141.29E-12	-677.69E-6	13.554E-9
54	GH.1	48.16727	-36.07909	106.80000	-0.34529	106.78	-137.36E-12	-666.82E-6	13.336E-9
54	GH.1	48.63773	-35.98591	106.80000	-0.34284	106.78	-133.55E-12	-656.13E-6	13.123E-9
54	GH.1	49.10818	-35.89273	106.80000	-0.34058	106.78	-129.86E-12	-645.63E-6	12.913E-9
54	GH.1	49.57864	-35.79955	106.80000	-0.33851	106.78	-126.27E-12	-635.30E-6	12.706E-9
54	GH.1	50.04909	-35.70636	106.80000	-0.33664	106.78	-122.79E-12	-625.15E-6	12.503E-9
54	GH.1	50.51955	-35.61318	106.80000	-0.33496	106.78	-119.40E-12	-615.17E-6	12.303E-9
54	GH.1	50.99000	-35.52000	106.80000	-0.33348	106.78	-116.13E-12	-605.37E-6	12.107E-9
55	GH.2	50.99000	-35.52000	106.80000	-0.33348	106.78	-116.13E-12	-605.37E-6	12.107E-9
55	GH.2	51.08333	-35.93000	106.80000	-0.32619	106.78	-113.44E-12	-597.07E-6	11.941E-9
55	GH.2	51.17667	-36.34000	106.80000	-0.31902	106.78	-110.82E-12	-588.89E-6	11.778E-9
55	GH.2	51.27000	-36.75000	106.80000	-0.31195	106.78	-108.27E-12	-580.82E-6	11.616E-9
55	GH.2	51.36333	-37.16000	106.80000	-0.30500	106.78	-105.77E-12	-572.87E-6	11.457E-9
55	GH.2	51.45667	-37.57000	106.80000	-0.29815	106.78	-103.33E-12	-565.03E-6	11.301E-9
55	GH.2	51.55000	-37.98000	106.80000	-0.29142	106.78	-100.95E-12	-557.30E-6	11.146E-9
55	GH.3	51.55000	-37.98000	106.80000	-0.29142	106.78	-100.95E-12	-557.30E-6	11.146E-9
56	GH.3	52.00125	-37.91500	106.80000	-0.29005	106.78	-98.331E-12	-548.89E-6	10.978E-9
56	GH.3	52.45250	-37.84500	106.80000	-0.28882	106.78	-95.783E-12	-540.92E-6	10.812E-9
56	GH.3	52.90375	-37.77500	106.80000	-0.28774	106.78	-93.307E-12	-532.49E-6	10.650E-9
56	GH.3	53.35500	-37.72000	106.80000	-0.28680	106.78	-90.903E-12	-524.50E-6	10.490E-9
56	GH.3	53.80625	-37.65500	106.80000	-0.28600	106.78	-88.566E-12	-516.64E-6	10.333E-9
56	GH.3	54.25750	-37.59000	106.80000	-0.28535	106.78	-86.292E-12	-508.91E-6	10.178E-9
56	GH.3	54.70875	-37.52500	106.80000	-0.28483	106.78	-84.066E-12	-501.32E-6	10.026E-9
56	GH.3	55.16000	-37.46000	106.80000	-0.28446	106.78	-81.934E-12	-493.85E-6	9.8769E-9
57	GH.4	55.16000	-37.46000	106.80000	-0.28446	106.78	-81.934E-12	-493.85E-6	9.8769E-9
57	GH.4	55.25406	-37.93781	106.80000	-0.27698	106.78	-79.973E-12	-486.80E-6	9.7360E-9
57	GH.4	55.34812	-38.41562	106.80000	-0.26963	106.78	-78.056E-12	-479.86E-6	9.5971E-9
57	GH.4	55.44219	-38.89344	106.80000	-0.26243	106.78	-76.184E-12	-473.01E-6	9.4602E-9
57	GH.4	55.53625	-39.37125	106.80000	-0.25536	106.78	-74.355E-12	-466.26E-6	9.3251E-9
57	GH.4	55.63031	-39.84906	106.80000	-0.24842	106.78	-72.573E-12	-459.60E-6	9.1920E-9
57	GH.4	55.72437	-40.32688	106.80000	-0.24162	106.78	-70.834E-12	-453.04E-6	9.0608E-9
57	GH.4	55.81844	-40.80469	106.80000	-0.23496	106.78	-69.134E-12	-446.57E-6	8.9315E-9
57	GH.4	55.91250	-41.28250	106.80000	-0.22842	106.78	-67.478E-12	-440.22E-6	8.8040E-9
57	GH.4	56.00656	-41.76031	106.80000	-0.22201	106.78	-65.855E-12	-433.92E-6	8.6784E-9
57	GH.4	56.10063	-42.23813	106.80000	-0.21574	106.78	-64.278E-12	-427.73E-6	8.5546E-9
57	GH.4	56.19469	-42.71594	106.80000	-0.20959	106.78	-62.737E-12	-421.63E-6	8.4326E-9
57	GH.4	56.28875	-43.19375	106.80000	-0.20357	106.78	-61.233E-12	-415.62E-6	8.3125E-9
57	GH.4	56.38281	-43.67156	106.80000	-0.19767	106.78	-59.769E-12	-409.71E-6	8.1941E-9
57	GH.4	56.47687	-44.14937	106.80000	-0.19190	106.78	-58.339E-12	-403.87E-6	8.0775E-9
57	GH.4	56.57094	-44.62719	106.80000	-0.18625	106.78	-56.944E-12	-398.13E-6	7.9626E-9
57	GH.4	56.66500	-45.10500	106.80000	-0.18072	106.78	-55.584E-12	-392.47E-6	7.8495E-9
57	GH.4	56.75906	-45.58281	106.80000	-0.17530	106.78	-54.253E-12	-386.90E-6	7.7380E-9
57	GH.4	56.85312	-46.06063	106.80000	-0.16999	106.78	-52.958E-12	-381.41E-6	7.6282E-9
57	GH.4	56.94719	-46.53844	106.80000	-0.16483	106.78	-51.696E-12	-376.01E-6	7.5201E-9
57	GH.4	57.04125	-47.01625	106.80000	-0.15976	106.78	-50.468E-12	-370.68E-6	7.4137E-9
57	GH.4	57.13531	-47.49406	106.80000	-0.15481	106.78	-49.267E-12	-365.44E-6	7.3088E-9
57	GH.4	57.22937	-47.97187	106.80000	-0.14997	106.78	-48.095E-12	-360.28E-6	7.2056E-9
57	GH.4	57.32344	-48.44969	106.80000	-0.14525	106.78	-46.955E-12	-355.20E-6	7.1040E-9
57	GH.4	57.41750	-48.92750	106.80000	-0.14060	106.78	-45.844E-12	-350.19E-6	7.0039E-9
57	GH.4	57.51156	-49.40531	106.80000	-0.13608	106.78	-44.756E-12	-345.27E-6	6.9053E-9
57	GH.4	57.60563	-49.88312	106.80000	-0.13166	106.78	-43.700E-12	-340.41E-6	6.8083E-9
57	GH.4	57.69969	-50.36094	106.80000	-0.12734	106.78	-42.666E-12	-335.64E-6	6.7128E-9
57	GH.4	57.79375	-50.83875	106.80000	-0.12313	106.78	-41.663E-12	-330.94E-6	6.6187E-9
57	GH.4	57.88781	-51.31656	106.80000	-0.11901	106.78	-40.681E-12	-326.31E-6	6.5261E-9
57	GH.4	57.98188	-51.79438	106.80000	-0.11498	106.78	-39.728E-12	-321.75E-6	6.4350E-9
57	GH.4	58.07594	-52.27219	106.80000	-0.11105	106.78	-38.795E-12	-317.26E-6	6.3452E-9
57	GH.4	58.17000	-52.75000	106.80000	-0.10722	106.78	-37.888E-12	-312.85E-6	6.2569E-9
58	GH.5	58.17000	-52.75000	106.80000	-0.10722	106.78	-37.888E-12	-312.85E-6	6.2569E-9
58	GH.5	57.81667	-52.84000	106.80000	-0.10715	106.78	-38.404E-12	-315.31E-6	6.3063E-9
58	GH.5	57.46333	-52.93000	106.80000	-0.10711	106.78	-38.924E-12	-317.80E-6	6.3560E-9
58	GH.5	57.11000	-53.02000	106.80000	-0.10709	106.78	-39.454E-12	-320.30E-6	6.4059E-9
59	GH.6	57.11000	-53.02000	106.80000	-0.10709	106.78	-39.454E-12	-320.30E-6	6.4059E-9
59	GH.6	57.20556	-53.48556	106.80000	-0.10344	106.78	-38.532E-12	-315.55E-6	6.3107E-9
59	GH.6	57.30111	-53.95111	106.80000	-0.09988	106.78	-37.633E-12	-311.48E-6	6.2295E-9
59	GH.6	57.39667	-54.41667	106.80000	-0.09640	106.78	-36.759E-12	-307.17E-6	6.1434E-9
59	GH.6	57.49222	-54.88222	106.80000	-0.09300	106.78	-35.905E-12	-302.93E-6	6.0587E-9
59	GH.6	57.58778	-55.34778	106.80000	-0.08968	106.78	-35.072E-12	-298.76E-6	5.9753E-9
59	GH.6	57.68333	-55.81333	106.80000	-0.08644	106.78	-34.261E-12	-294.64E-6	5.8932E-9
59	GH.6	57.77889	-56.27889	106.80000	-0.08327	106.78	-33.468E-12	-290.62E-6	5.8124E-9
59	GH.6	57.87444	-56.74444	106.80000	-0.08019	106.78	-32.701E-12	-286.65E-6	5.7329E-9
59	GH.6	57.97000	-57.21000	106.80000	-0.07717	106.78	-31.948E-12	-282.73E-6	5.6547E-9
60	GH.7	57.97000	-57.21000	106.80000	-0.07717	106.78	-31.948E-12	-282.73E-6	5.6547E-9
60	GH.7	57.49667	-57.30566	106.80000	-0.07737	106.78	-32.513E-12	-285.36E-6	5.7125E-9
60	GH.7	57.02333	-57.40111	106.80000	-0.07752	106.78	-33.085E-12	-288.54E-6	5.7709E-9
60	GH.7	56.55000	-57.49667	106.80000	-0.07773	106.78	-33.665E-12	-291.48E-6	5.8296E-9
60	GH.7	56.07667	-57.59222	106.80000	-0.07796	106.78	-34.258E-12	-294.44E-6	5.8888E-9
60	GH.7	55.60333	-57.68778	106.80000	-0.07822	106.78	-34.857E-12	-297.42E-6	5.9484E-9
60	GH.7	55.13000	-57.78333	106.80000	-0.07850				

Oasys Highgate Junior School Sports Hall Unloading and Loading Long Term										Job No.	Sheet No.	Rev.		
										3244				
										Drg. Ref.				
Made by AC										Date	Checked			
Ref.	Name	x	y	z	δz	Stress: Calc. Level	Stress: Vertical	Stress: Sum Princ.	Vert. Strain					
		[m]	[m]	[mOD]	[mm]	[mOD]	[kN/m ²]	[kN/m ²]	[µ]					
62	GH.9	45.54737	-51.58421	106.80000	-0.15600	106.78	-75.342E-12	-466.37E-6	9.3275E-9					
62	GH.9	45.07789	-51.67737	106.80000	-0.15731	106.78	-76.828E-12	-471.62E-6	9.4323E-9					
62	GH.9	44.60842	-51.77053	106.80000	-0.15866	106.78	-78.336E-12	-476.90E-6	9.5379E-9					
62	GH.9	44.13895	-51.86368	106.80000	-0.16005	106.78	-79.870E-12	-482.21E-6	9.6442E-9					
62	GH.9	43.66947	-51.95684	106.80000	-0.16147	106.78	-81.429E-12	-487.56E-6	9.7512E-9					
62	GH.9	43.20000	-52.05000	106.80000	-0.16293	106.78	-83.009E-12	-492.95E-6	9.8589E-9					
63	27.BLR.1	5.43000	57.47000	106.80000	-0.29539	106.78	-328.65E-12	-0.0011057	22.114E-9					
63	27.BLR.1	4.93316	57.45395	106.80000	-0.29477	106.78	-332.23E-12	-0.0011128	22.255E-9					
63	27.BLR.1	4.43632	57.43789	106.80000	-0.29415	106.78	-335.71E-12	-0.0011196	22.392E-9					
63	27.BLR.1	3.93947	57.42184	106.80000	-0.29354	106.78	-339.10E-12	-0.0011262	22.525E-9					
63	27.BLR.1	3.44263	57.40579	106.80000	-0.29292	106.78	-342.39E-12	-0.0011326	22.653E-9					
63	27.BLR.1	2.94579	57.38974	106.80000	-0.29229	106.78	-345.58E-12	-0.0011388	22.776E-9					
63	27.BLR.1	2.44895	57.37368	106.80000	-0.29166	106.78	-348.66E-12	-0.0011448	22.895E-9					
63	27.BLR.1	1.95211	57.35763	106.80000	-0.29101	106.78	-351.62E-12	-0.0011505	23.009E-9					
63	27.BLR.1	1.45526	57.34158	106.80000	-0.29035	106.78	-354.46E-12	-0.0011559	23.119E-9					
63	27.BLR.1	0.95842	57.32553	106.80000	-0.28968	106.78	-357.18E-12	-0.0011611	23.223E-9					
63	27.BLR.1	0.46158	57.30947	106.80000	-0.28898	106.78	-359.78E-12	-0.0011661	23.321E-9					
63	27.BLR.1	-0.03526	57.29342	106.80000	-0.28825	106.78	-362.25E-12	-0.0011707	23.415E-9					
63	27.BLR.1	-0.53211	57.27737	106.80000	-0.28751	106.78	-364.58E-12	-0.0011751	23.503E-9					
63	27.BLR.1	-1.02895	57.26132	106.80000	-0.28673	106.78	-366.77E-12	-0.0011793	23.585E-9					
63	27.BLR.1	-1.52579	57.24526	106.80000	-0.28593	106.78	-368.82E-12	-0.0011831	23.662E-9					
63	27.BLR.1	-2.02263	57.22921	106.80000	-0.28509	106.78	-370.72E-12	-0.0011867	23.733E-9					
63	27.BLR.1	-2.51947	57.21316	106.80000	-0.28422	106.78	-372.48E-12	-0.0011899	23.799E-9					
63	27.BLR.1	-3.01632	57.19711	106.80000	-0.28331	106.78	-374.09E-12	-0.0011929	23.858E-9					
63	27.BLR.1	-3.51316	57.18105	106.80000	-0.28236	106.78	-375.54E-12	-0.0011956	23.912E-9					
63	27.BLR.1	-4.01000	57.16500	106.80000	-0.28138	106.78	-376.84E-12	-0.0011980	23.959E-9					
63	27.BLR.1	-4.50684	57.14895	106.80000	-0.28035	106.78	-377.98E-12	-0.0012000	24.001E-9					
63	27.BLR.1	-5.00368	57.13289	106.80000	-0.27929	106.78	-378.95E-12	-0.0012018	24.036E-9					
63	27.BLR.1	-5.50053	57.11684	106.80000	-0.27818	106.78	-379.77E-12	-0.0012032	24.065E-9					
63	27.BLR.1	-5.99737	57.10079	106.80000	-0.27702	106.78	-380.42E-12	-0.0012044	24.088E-9					
63	27.BLR.1	-6.49421	57.08474	106.80000	-0.27582	106.78	-380.91E-12	-0.0012052	24.104E-9					
63	27.BLR.1	-6.99105	57.06868	106.80000	-0.27457	106.78	-381.23E-12	-0.0012057	24.115E-9					
63	27.BLR.1	-7.48789	57.05263	106.80000	-0.27328	106.78	-381.39E-12	-0.0012059	24.119E-9					
63	27.BLR.1	-7.98474	57.03658	106.80000	-0.27194	106.78	-381.39E-12	-0.0012058	24.117E-9					
63	27.BLR.1	-8.48158	57.02053	106.80000	-0.27055	106.78	-381.21E-12	-0.0012054	24.108E-9					
63	27.BLR.1	-8.97842	57.00447	106.80000	-0.26911	106.78	-380.87E-12	-0.0012047	24.093E-9					
63	27.BLR.1	-9.47526	56.98842	106.80000	-0.26762	106.78	-380.37E-12	-0.0012036	24.072E-9					
63	27.BLR.1	-9.97211	56.97237	106.80000	-0.26609	106.78	-379.69E-12	-0.0012022	24.045E-9					
63	27.BLR.1	-10.46895	56.95632	106.80000	-0.26450	106.78	-378.86E-12	-0.0012006	24.011E-9					
63	27.BLR.1	-10.96579	56.94026	106.80000	-0.26287	106.78	-377.86E-12	-0.0011986	23.972E-9					
63	27.BLR.1	-11.46263	56.92421	106.80000	-0.26122	106.78	-376.70E-12	-0.0011963	23.926E-9					
63	27.BLR.1	-11.95947	56.90816	106.80000	-0.25945	106.78	-375.38E-12	-0.0011937	23.874E-9					
63	27.BLR.1	-12.45632	56.89211	106.80000	-0.25767	106.78	-373.91E-12	-0.0011908	23.816E-9					
63	27.BLR.1	-12.95316	56.87605	106.80000	-0.25584	106.78	-372.28E-12	-0.0011876	23.752E-9					
63	27.BLR.1	-13.45000	56.86000	106.80000	-0.25396	106.78	-370.49E-12	-0.0011841	23.682E-9					
64	27.BLR.2	5.43000	49.32000	106.80000	-0.49169	106.78	-783.25E-12	-0.0018188	36.376E-9					
64	27.BLR.2	5.43000	49.79941	106.80000	-0.47649	106.78	-740.74E-12	-0.0017619	35.238E-9					
64	27.BLR.2	5.43000	50.27882	106.80000	-0.46185	106.78	-701.00E-12	-0.0017074	34.149E-9					
64	27.BLR.2	5.43000	50.75824	106.80000	-0.44774	106.78	-663.82E-12	-0.0016552	33.104E-9					
64	27.BLR.2	5.43000	51.23765	106.80000	-0.43414	106.78	-629.01E-12	-0.0016051	32.101E-9					
64	27.BLR.2	5.43000	51.71706	106.80000	-0.42103	106.78	-596.39E-12	-0.0015570	31.140E-9					
64	27.BLR.2	5.43000	52.19647	106.80000	-0.40838	106.78	-565.80E-12	-0.0015108	30.216E-9					
64	27.BLR.2	5.43000	52.67588	106.80000	-0.39618	106.78	-537.10E-12	-0.0014664	29.329E-9					
64	27.BLR.2	5.43000	53.15529	106.80000	-0.38442	106.78	-510.14E-12	-0.0014238	28.476E-9					
64	27.BLR.2	5.43000	53.63471	106.80000	-0.37307	106.78	-484.81E-12	-0.0013828	27.657E-9					
64	27.BLR.2	5.43000	54.11412	106.80000	-0.36212	106.78	-460.99E-12	-0.0013434	26.869E-9					
64	27.BLR.2	5.43000	54.59353	106.80000	-0.35155	106.78	-438.57E-12	-0.0013055	26.110E-9					
64	27.BLR.2	5.43000	55.07294	106.80000	-0.34135	106.78	-417.46E-12	-0.0012690	25.381E-9					
64	27.BLR.2	5.43000	55.55235	106.80000	-0.33151	106.78	-397.57E-12	-0.0012339	24.678E-9					
64	27.BLR.2	5.43000	56.03176	106.80000	-0.32200	106.78	-378.82E-12	-0.0012001	24.001E-9					
64	27.BLR.2	5.43000	56.51118	106.80000	-0.31282	106.78	-361.13E-12	-0.0011674	23.349E-9					
64	27.BLR.2	5.43000	56.99059	106.80000	-0.30395	106.78	-344.43E-12	-0.0011360	22.720E-9					
64	27.BLR.2	5.43000	57.47000	106.80000	-0.29539	106.78	-328.65E-12	-0.0011057	22.114E-9					
65	27.BLR.3	3.28000	49.32000	106.80000	-0.49392	106.78	-823.87E-12	-0.0018743	37.486E-9					
65	27.BLR.3	3.71000	49.32000	106.80000	-0.49360	106.78	-816.24E-12	-0.0018640	37.279E-9					
65	27.BLR.3	4.14000	49.32000	106.80000	-0.49322	106.78	-808.18E-12	-0.0018532	37.064E-9					
65	27.BLR.3	4.57000	49.32000	106.80000	-0.49277	106.78	-800.23E-12	-0.0018421	36.842E-9					
65	27.BLR.3	5.00000	49.32000	106.80000	-0.49225	106.78	-791.85E-12	-0.0018306	36.612E-9					
65	27.BLR.3	5.43000	49.32000	106.80000	-0.49169	106.78	-783.25E-12	-0.0018188	36.376E-9					
66	27.BLR.4	3.26000	32.61000	106.80000	-1.73545	106.78	-11.596E-9	-0.0080558	161.11E-9					
66	27.BLR.4	3.26059	33.10147	106.80000	-1.66413	106.78	-10.421E-9	-0.0078613	152.66E-9					
66	27.BLR.4	3.26118	33.59294	106.80000	-1.59644	106.78	-9.3912E-9	-0.0072036	144.07E-9					
66	27.BLR.4	3.26176	34.08441	106.80000	-1.53213	106.78	-8.4853E-9	-0.0068242	136.48E-9					

Oasys Highgate Junior School Sports Hall Unloading and Loading Long Term						Job No.	Sheet No.	Rev.	
						3244			
						Drg. Ref.			
						Made by AC	Date	Checked	
Ref.	Name	x	y	z	δz	Stress: Calc. Level	Stress: Vertical	Stress: Sum Princ.	Vert. Strain
		[m]	[m]	[mOD]	[mm]	[mOD]	[kN/m²]	[kN/m²]	[µ]
67	27.BLR.5	-0.64824	32.59353	106.80000	-1.79095	106.78	-13.194E-9	-0.0087897	175.79E-9
67	27.BLR.5	-0.15971	32.59559	106.80000	-1.78681	106.78	-13.038E-9	-0.0087172	174.34E-9
67	27.BLR.5	0.32882	32.59765	106.80000	-1.78185	106.78	-12.870E-9	-0.0086389	172.78E-9
67	27.BLR.5	0.81735	32.59971	106.80000	-1.77608	106.78	-12.688E-9	-0.0085549	171.10E-9
67	27.BLR.5	1.30588	32.60176	106.80000	-1.76951	106.78	-12.493E-9	-0.0084653	169.31E-9
67	27.BLR.5	1.79441	32.60382	106.80000	-1.76215	106.78	-12.287E-9	-0.0083705	167.41E-9
67	27.BLR.5	2.28294	32.60588	106.80000	-1.75401	106.78	-12.068E-9	-0.0082705	165.41E-9
67	27.BLR.5	2.77147	32.60794	106.80000	-1.74511	106.78	-11.838E-9	-0.0081655	163.31E-9
67	27.BLR.5	3.26000	32.61000	106.80000	-1.73545	106.78	-11.596E-9	-0.0080558	161.11E-9
68	27.BLR.6	-13.29000	42.10000	106.80000	-0.75096	106.78	-2.2371E-9	-0.0032936	65.872E-9
68	27.BLR.6	-13.29300	41.62200	106.80000	-0.77861	106.78	-2.4037E-9	-0.0034285	68.570E-9
68	27.BLR.6	-13.29600	41.14400	106.80000	-0.80739	106.78	-2.5857E-9	-0.0035711	71.421E-9
68	27.BLR.6	-13.29900	40.66600	106.80000	-0.83734	106.78	-2.7848E-9	-0.0037218	74.436E-9
68	27.BLR.6	-13.30200	40.18800	106.80000	-0.86853	106.78	-3.0032E-9	-0.0038814	77.627E-9
68	27.BLR.6	-13.30500	39.71000	106.80000	-0.90103	106.78	-3.2429E-9	-0.0040504	81.008E-9
68	27.BLR.6	-13.30800	39.23200	106.80000	-0.93489	106.78	-3.5065E-9	-0.0042297	84.593E-9
68	27.BLR.6	-13.31100	38.75400	106.80000	-0.97019	106.78	-3.7970E-9	-0.0044199	88.399E-9
68	27.BLR.6	-13.31400	38.27600	106.80000	-1.00701	106.78	-4.1176E-9	-0.0046221	92.442E-9
68	27.BLR.6	-13.31700	37.79800	106.80000	-1.04542	106.78	-4.4723E-9	-0.0048372	96.744E-9
68	27.BLR.6	-13.32000	37.32000	106.80000	-1.08551	106.78	-4.8653E-9	-0.0050663	101.33E-9
68	27.BLR.6	-13.32300	36.84200	106.80000	-1.12737	106.78	-5.3018E-9	-0.0053105	106.21E-9
68	27.BLR.6	-13.32600	36.36400	106.80000	-1.17110	106.78	-5.7877E-9	-0.0055712	111.42E-9
68	27.BLR.6	-13.32900	35.88600	106.80000	-1.21681	106.78	-6.3297E-9	-0.0058498	117.00E-9
68	27.BLR.6	-13.33200	35.40800	106.80000	-1.26460	106.78	-6.9360E-9	-0.0061480	122.96E-9
68	27.BLR.6	-13.33500	34.93000	106.80000	-1.31461	106.78	-7.6159E-9	-0.0064677	129.35E-9
68	27.BLR.6	-13.33800	34.45200	106.80000	-1.36697	106.78	-8.3803E-9	-0.0068107	136.21E-9
68	27.BLR.6	-13.34100	33.97400	106.80000	-1.42181	106.78	-9.2422E-9	-0.0071795	143.59E-9
68	27.BLR.6	-13.34400	33.49600	106.80000	-1.47930	106.78	-10.217E-9	-0.0075766	151.53E-9
68	27.BLR.6	-13.34700	33.01800	106.80000	-1.53959	106.78	-11.323E-9	-0.0080048	160.10E-9
68	27.BLR.6	-13.35000	32.54000	106.80000	-1.60288	106.78	-12.582E-9	-0.0084676	169.35E-9
69	27.BLR.7	-11.75000	42.04000	106.80000	-0.77399	106.78	-2.3301E-9	-0.0033770	67.540E-9
69	27.BLR.7	-12.13500	42.05500	106.80000	-0.76843	106.78	-2.3081E-9	-0.0033574	67.147E-9
69	27.BLR.7	-12.52000	42.07000	106.80000	-0.76273	106.78	-2.2852E-9	-0.0033369	66.738E-9
69	27.BLR.7	-12.90500	42.08500	106.80000	-0.75691	106.78	-2.2616E-9	-0.0033156	66.313E-9
69	27.BLR.7	-13.29000	42.10000	106.80000	-0.75096	106.78	-2.2371E-9	-0.0032936	65.872E-9
70	27.BLR.8	-11.65000	51.49000	106.80000	-0.38546	106.78	-675.80E-12	-0.0016739	33.478E-9
70	27.BLR.8	-11.65526	50.99263	106.80000	-0.39958	106.78	-715.77E-12	-0.0017299	34.598E-9
70	27.BLR.8	-11.66053	50.49526	106.80000	-0.41425	106.78	-758.66E-12	-0.0017884	35.769E-9
70	27.BLR.8	-11.66579	49.99789	106.80000	-0.42947	106.78	-804.72E-12	-0.0018497	36.994E-9
70	27.BLR.8	-11.67105	49.50053	106.80000	-0.44528	106.78	-854.22E-12	-0.0019138	38.276E-9
70	27.BLR.8	-11.67632	49.00316	106.80000	-0.46171	106.78	-907.48E-12	-0.0019801	39.620E-9
70	27.BLR.8	-11.68158	48.50579	106.80000	-0.47877	106.78	-964.83E-12	-0.0020514	41.028E-9
70	27.BLR.8	-11.68684	48.00842	106.80000	-0.49650	106.78	-1.0266E-9	-0.0021252	42.505E-9
70	27.BLR.8	-11.69211	47.51105	106.80000	-0.51492	106.78	-1.0934E-9	-0.0022027	44.054E-9
70	27.BLR.8	-11.69737	47.01368	106.80000	-0.53408	106.78	-1.1654E-9	-0.0022841	45.681E-9
70	27.BLR.8	-11.70263	46.51632	106.80000	-0.55399	106.78	-1.2434E-9	-0.0023695	47.391E-9
70	27.BLR.8	-11.70789	46.01895	106.80000	-0.57470	106.78	-1.3277E-9	-0.0024594	49.188E-9
70	27.BLR.8	-11.71316	45.52158	106.80000	-0.59625	106.78	-1.4192E-9	-0.0025540	51.079E-9
70	27.BLR.8	-11.71842	45.02421	106.80000	-0.61867	106.78	-1.5184E-9	-0.0026535	53.070E-9
70	27.BLR.8	-11.72368	44.52684	106.80000	-0.64200	106.78	-1.6263E-9	-0.0027584	55.168E-9
70	27.BLR.8	-11.72895	44.02947	106.80000	-0.66628	106.78	-1.7436E-9	-0.0028690	57.380E-9
70	27.BLR.8	-11.73421	43.53211	106.80000	-0.69158	106.78	-1.8715E-9	-0.0029857	59.714E-9
70	27.BLR.8	-11.73947	43.03474	106.80000	-0.71793	106.78	-2.0110E-9	-0.0031090	62.179E-9
70	27.BLR.8	-11.74474	42.53737	106.80000	-0.74538	106.78	-2.1634E-9	-0.0032392	64.784E-9
70	27.BLR.8	-11.75000	42.04000	106.80000	-0.77399	106.78	-2.3301E-9	-0.0033770	67.540E-9
71	27.BLR.9	-13.52000	51.57000	106.80000	-0.37209	106.78	-651.86E-12	-0.0016381	32.762E-9
71	27.BLR.9	-13.05250	51.55000	106.80000	-0.37553	106.78	-658.20E-12	-0.0016476	32.952E-9
71	27.BLR.9	-12.58500	51.53000	106.80000	-0.37891	106.78	-664.31E-12	-0.0016568	33.136E-9
71	27.BLR.9	-12.11750	51.51000	106.80000	-0.38222	106.78	-670.18E-12	-0.0016655	33.311E-9
71	27.BLR.9	-11.65000	51.49000	106.80000	-0.38546	106.78	-675.80E-12	-0.0016739	33.478E-9
72	27.BLR.10	-13.45000	56.86000	106.80000	-0.25396	106.78	-370.49E-12	-0.0018497	23.682E-9
72	27.BLR.10	-13.45636	56.37909	106.80000	-0.26293	106.78	-388.96E-12	-0.0012178	24.356E-9
72	27.BLR.10	-13.46273	55.89818	106.80000	-0.27223	106.78	-408.56E-12	-0.0012528	25.055E-9
72	27.BLR.10	-13.46909	55.41727	106.80000	-0.28184	106.78	-429.36E-12	-0.0012891	25.782E-9
72	27.BLR.10	-13.47545	54.93636	106.80000	-0.29179	106.78	-451.46E-12	-0.0013269	26.537E-9
72	27.BLR.10	-13.48182	54.45545	106.80000	-0.30210	106.78	-474.96E-12	-0.0013648	27.323E-9
72	27.BLR.10	-13.48818	53.97455	106.80000	-0.31277	106.78	-499.96E-12	-0.0014070	28.140E-9
72	27.BLR.10	-13.49455	53.49364	106.80000	-0.32381	106.78	-526.58E-12	-0.0014495	28.990E-9
72	27.BLR.10	-13.50091	53.01273	106.80000	-0.33525	106.78	-554.93E-12	-0.0014938	29.876E-9
72	27.BLR.10	-13.50727	52.53182	106.80000	-0.34710	106.78	-585.17E-12	-0.0015399	30.798E-9
72	27.BLR.10	-13.51364	52.05091	106.80000	-0.35938	106.78	-617.42E-12	-0.0015801	31.759E-9
72	27.BLR.10	-13.52000	51.57000	106.80000	-0.37209	106.78	-651.86E-12	-0.0016381	32.762E-9
73	25.BLR.1	-5.31000	78.65000	106.80000	-0.06300	106.78	-62.574E-12	-420.75E-6	8.4150E-9