

feasibility study – james gillespie's high school

Chartered Quantity Surveyors : Building Surveyors : Project Managers : CDM Co-ordinators

CITY OF EDINBURGH COUNCIL

**JAMES GILLESPIE'S HIGH SCHOOL
FEASIBILITY STUDY**

January 2008

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1 EXECUTIVE SUMMARY

1.1 This report considers the re-development of James Gillespie’s High School on the existing site. No alternative sites have been identified for consideration.

1.2 The key risks specific to this project which have been identified at this stage are:

- Disruption and health and safety risks associated with on-site decanting and phasing of the works.
- Difficulty in attracting a suitable contractor to carry out the works.

1.3 The likely programme for implementation of this project is 6 years from the point of commencing the design team procurement.

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2 INTRODUCTION

The purpose of this report is to investigate the feasibility of the replacement of James Gillespies High School on the existing site. The report will identify the capital cost of construction and related issues, significant known site issues, key project risks and an indicative programme for implementation.

The project team involved in the preparation of this report is as follows:

- Project Managers - Thomas and Adamson
- Architects - JM Architects
- Quantity Surveyors - Gardiner & Theobald
- Structural Engineers - Will Rudd Davidson

This study follows on from a previous feasibility report issued in December 2002, which considered the potential refurbishment with options for minimal new-build extensions. Following completion of a Condition Survey on the existing building, a report was issued to the Executive of the Council dated 27 March 2007, recommending that “subject to further feasibility work, the most satisfactory option involves the remodelling of the school on a larger site created through the provision of a new nursery to replace the existing accommodation”.

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3 STAKEHOLDER LIAISON

3.1 Project Scoping

From discussions with representatives of the Children and Families Department at City of Edinburgh Council, it has been established that a 1200 pupil secondary school is required for James Gillespie’s.

To maximise cost certainty at this early stage, a ‘space budget’ has been established by Children and Families following a benchmarking exercise of other recently constructed schools of similar role throughout the UK. The ‘space budget’ assigned by Children and Families for a new build 1200 pupil school is 14,275 m², which includes a 30% provision for circulation and plant space. However, because of the nature of this project (phasing requirements, tying into the existing buildings, etc), the proposals show that it is necessary to exceed this to ensure the required accommodation for a 1200 pupil school is met. The gross internal floor area of the final proposals is 14,425m² (excluding Bruntsfield House).

Feedback from the School regarding Bruntsfield House suggests that the room proportions and layout do not provide facilities of a sufficient standard to meet the needs of any of the school’s current uses. Due to the ‘listing’ of this property, significant internal alterations are not thought to be possible. The proposals therefore assume that Bruntsfield House will not be required by the school for curricular activities. There are a number of possibilities for the use of this building, which will need to be explored further.

3.2 School Vision

The School was invited to submit a statement summarising its ‘vision’ for the school, which summarises the key aspects of any new school facilities from the School’s perspective. In response, the School have provided a list of key criteria that they would wish to be considered as the design progresses and this is included in Appendix A of this report.

Where possible at this early stage of the design, the school’s requirements have been addressed within the design. It should be noted however that where requirements exceed the standard provision for schools generally, compensatory reductions will be required in other areas to ensure the ‘space budget’ and corresponding costings can be achieved.

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4 EXISTING SCHOOL FACILITIES

The school currently comprises a number of separate buildings (constructed circa 1960) in and around a series of courtyards, all of which are centred on the A listed Bruntsfield House (constructed circa 1600).

The report to the Executive of the Council, dated 27 March 2007 described the findings of a recent Condition Survey. The Condition Survey suggested that significant elements of the buildings’ envelopes, services installations, internal finishings and fittings are all reaching the end of their serviceable life and are therefore in need of replacement. The report states that the buildings are in need of “substantial refurbishment or replacement” and are “increasingly proving to be no longer fit for purpose”.

The strategy proposed under section 5 of this report seeks to address the under-provision of classroom/staff base spaces as a matter of urgency as it is the outlying classroom blocks which are in need of the most short-term refurbishment. Works have already been enacted to upgrade the fire doors and alarm systems, as well as to provide lift access to some of the upper floor classrooms. However, further works to all roofs, windows, heating, lighting and sanitary systems will be required within the next decade.

In addition, enough ramps have been provided to meet the recommendations of the DDA access audit conducted in 2004, but the works remain an exercise in retrofit and have not produced an environment of inclusion as understood in the 21st century. For this, substantial new-build teaching clusters and attendant social spaces will be required.

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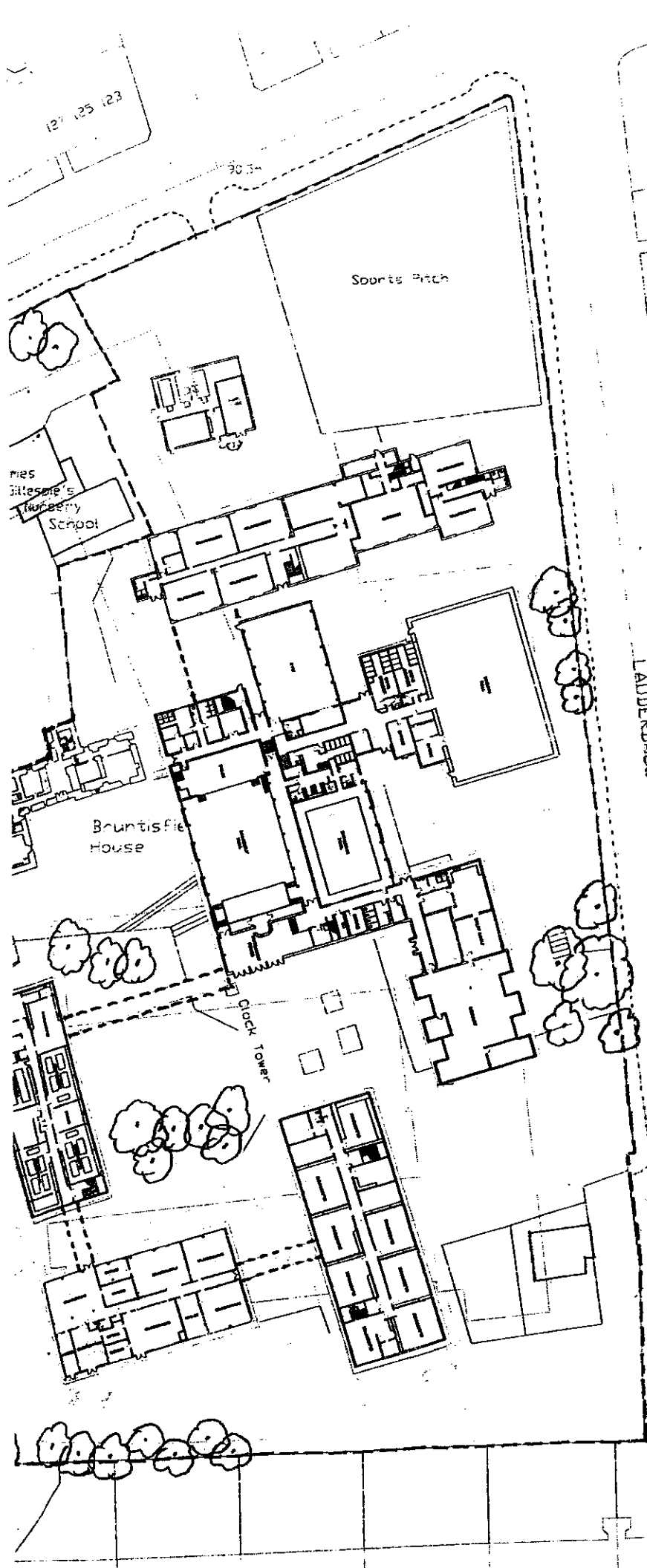
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**JAMES GILLESPIE'S HIGH SCHOOL
FEASIBILITY STUDY**

5 PROPOSED SOLUTION

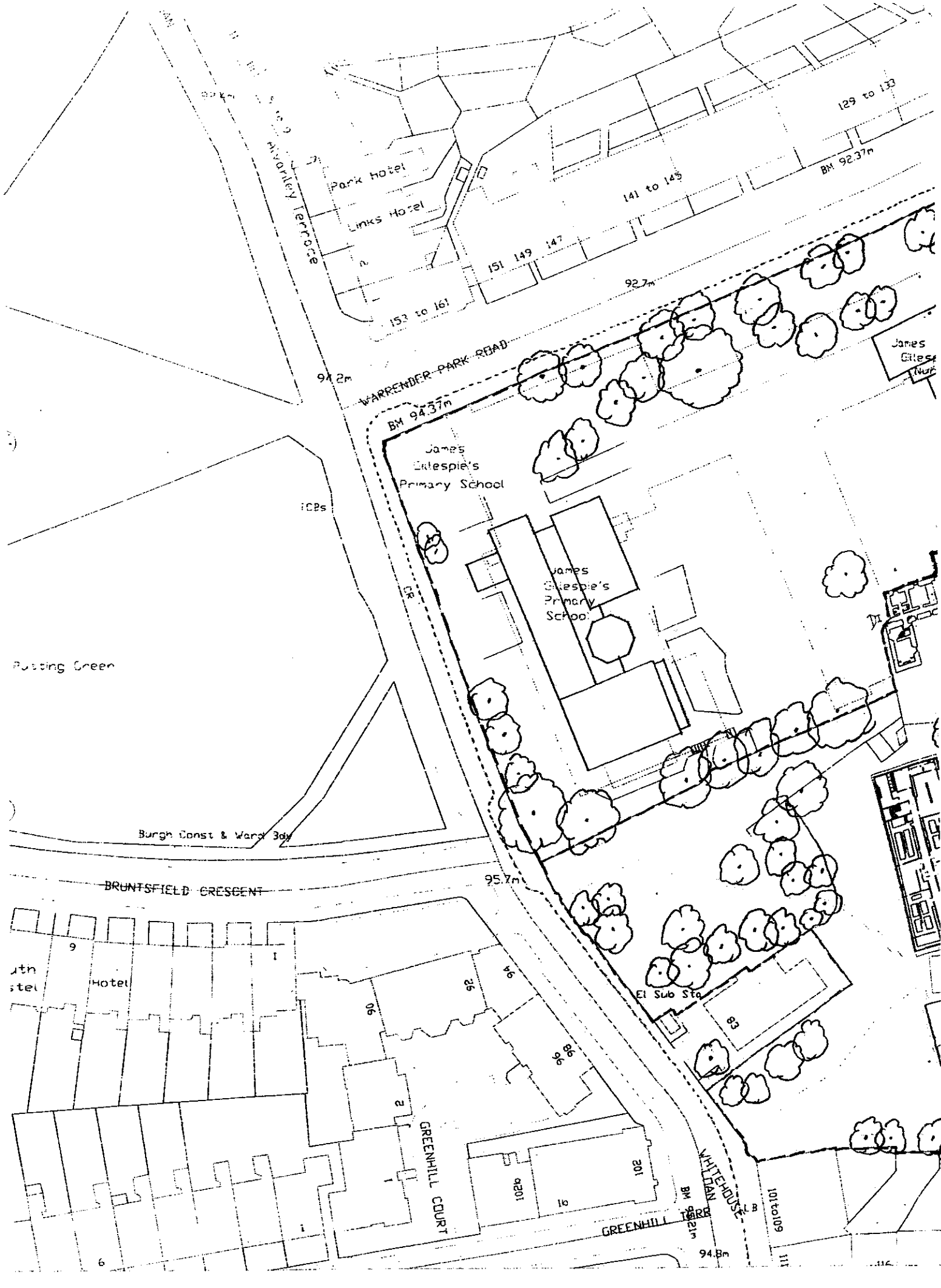
5.1 Existing Site Plans

James Gillespie's High School is situated to the South-West of the city centre, off Lauderdale Street and Warrender Park Road. The site is relatively small and is shared by the High School and James Gillespie's Primary School. The following plan shows the boundary of the High School site as existing.



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Park Hotel
Links Hotel

129 to 133

141 to 145

BM 92.37m

151 149 147

153 to 161

92.7m

94.2m

WARRENDER PARK ROAD

BM 94.37m

James Gillespie's Primary School

ICBs

James Gillespie's Primary School

Rusting Green

Burgh Const & Ward 3dy

BRUNTSFIELD CRESCENT

95.7m

Hotel

GREENHILL COURT

El Sub Sta

GREENHILL

WHITEHOUSE

BM 94.21m

101 to 109

6

111

116

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5 PROPOSED SOLUTION

5.2 Design Proposals

5.2.1 General Approach

The proposals outlined hereafter are for a completely re-built and enlarged school on the current site. For this to be economically viable, it would be necessary to conduct the works in three distinct phases, or operate substantial off-site de-canting of pupils. These proposals have sought to avoid the latter.

Early studies into the possibility of a joint development plan incorporating the adjacent primary school have not been advanced as the planning, listed building and conservation area restrictions along the north-western perimeter of the site preclude the formation of a large school frontage and of sizeable access/egress routes.

5.2.1 Phase 1

Phase 1, as indicated on the following drawing (ref L(0)0004), concentrates on the provision of new classroom accommodation and covered social/circulation space on the north-western part of the site facing the junction of Warrender Park Road and Lauderdale Street.

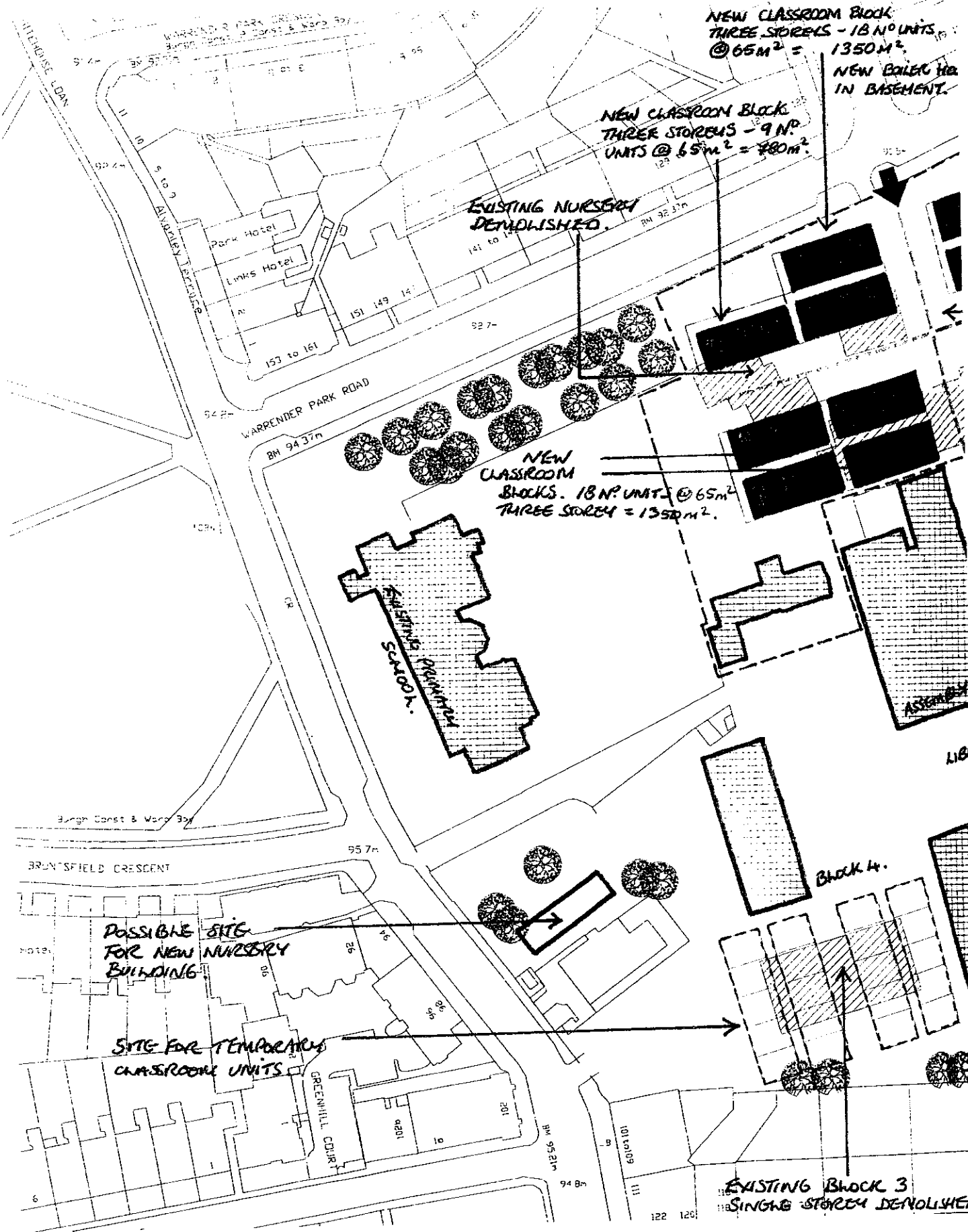
This area is currently used by Classroom block no 6, the nursery school, boiler house and all-weather sports pitches. It is suggested that a series of three storey classroom cluster blocks with central covered atrium space in this location could provide a total of 90-95 classroom spaces, a new kitchen/dining area and basement boiler house. This figure is close to the provision outlined in the generic accommodation schedule for secondary schools used for a series of new schools elsewhere in Scotland, whereas the existing school has approximately 70 classrooms many of which are smaller than currently recommended and contain minimal staff bases.

A central covered atrium between the blocks would add 2000m² of shared social/circulation space and secure reception/entrance foyers. The existing school suffers from ongoing security difficulties because of the number of entry/egress routes (both official and impromptu) and resolution of this is desired by the school.

The existing nursery building would be replaced elsewhere on the current site.

A southern temporary contractor's compound would be included in this phase during the nearest summer break to permit the demolition of the existing single storey classroom block no. 5 and the positioning of approximately 35 temporary classroom units. The TUs will be used for short-term on-site de-canting of classes to offset the loss of classroom blocks nos 5 and 6 and during short-term refurbishment work to some of the existing school buildings which are to be retained until later phases of development.

A separate Phase 1 operation will see the formation of a new administration block alongside the existing library. This should be three storeys to permit the inclusion of all the facilities currently located in Bruntsfield House, as well as the provision of new changing rooms for the adjacent sports hall, and a new staff room. This will allow the refurbishment of the listed building and will help to reduce the perceived isolation of the school's administration staff.



NEW CLASSROOM BLOCK
THREE STOREYS - 18 NO UNITS
@ 65m² = 1350m²
NEW BOILER HSE
IN BASEMENT.

NEW CLASSROOM BLOCK
THREE STOREYS - 9 NO
UNITS @ 65m² = 480m²

EXISTING NURSERY
DEMOLISHED.

NEW
CLASSROOM
BLOCKS. 18 NO UNITS @ 65m²
THREE STOREY = 1350m².

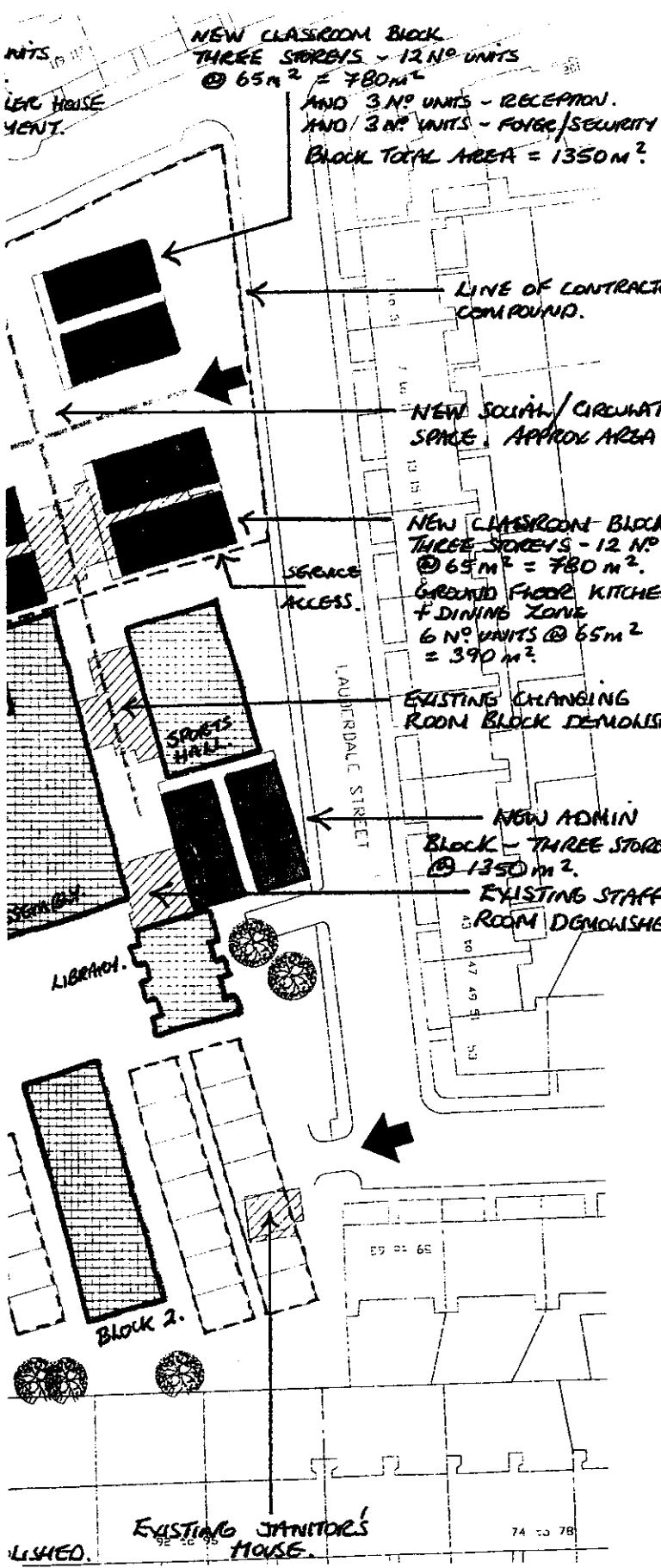
SCHOOL PLANTING
SCHEME

POSSIBLE SITE
FOR NEW NURSERY
BUILDING

SITE FOR TEMPORARY
CLASSROOM UNITS

Block 4.

EXISTING BLOCK 3
SINGLE STOREY DEMOLISHED



- ◀ Site access points
- ⊗ Existing trees
- Primary access/circulation routes
- New-build classrooms
- - - New-build boilerhouse
- ⋯ New-build community block
- ▨ New-build arts/drama block
- ▩ New-build assembly block
- - - Temporary classroom units
- New-build admin block
- New-build nursery block
- ▤ Existing buildings
- ▨ Buildings to be demolished
- New sports hall

PROJECT
JAMES GILLESPIE HIGH SCHOOL.

TITLE
SITE PLAN - PHASE I.

CLIENT

JOB No
4276.

SCALE
1:1250.

STATUS

DRAWING No
L(0)0004

REVISION
SC.

CHECKED BY

DATE
JAN 2008.

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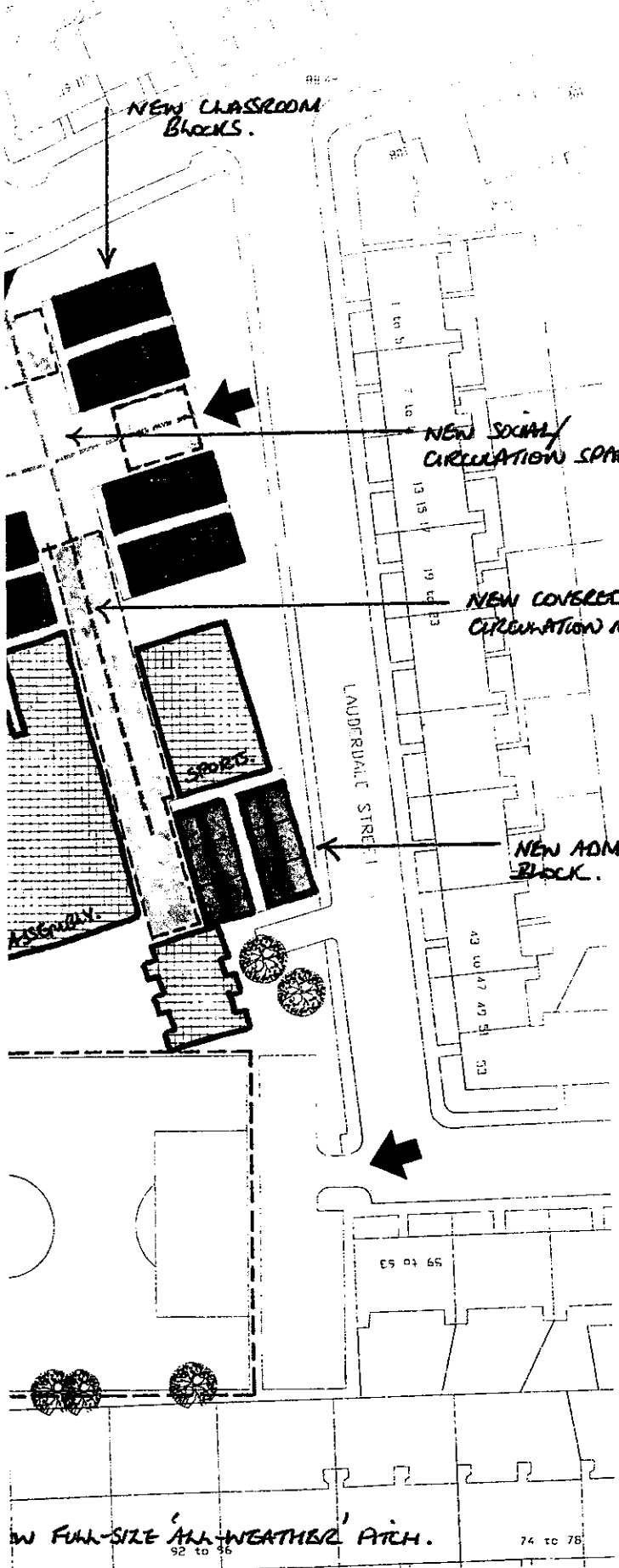
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5 PROPOSED SOLUTION

5.2 Design Proposals

5.2.3 Phase 2

Phase 2 is to include the demolition of all remaining existing classroom blocks in the southern part of the site to clear the way for a full-size all-weather sports pitch and on-site parking area. The removal of the existing sports hall changing rooms and staff room in Phase 1 will also now permit the extension of the atrium social/circulation space to form a new covered ‘school street’ to link together all remaining existing school buildings, which will include the assembly hall/performance space, swimming pool, sports hall and library.



- ← Site access points
- ⊗ Existing trees
- Primary access/circulation routes

- New-build classrooms
- ▤ New-build boilerhouse
- New-build community block
- New-build arts/drama block
- New-build assembly block
- Temporary classroom units
- New-build admin block
- New-build nursery block
- ▤ Existing buildings
- ▨ Buildings to be demolished
- New sports hall

PROJECT
JAMES GILLESPIE'S HIGH SCHOOL.

TITLE
SITE PLAN - PHASE II

CLIENT

JOB No
4276.

SCALE
1:1250.

STATUS

DRAWING No
L(0)0006.

REVISION
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DRAWN BY
SC.

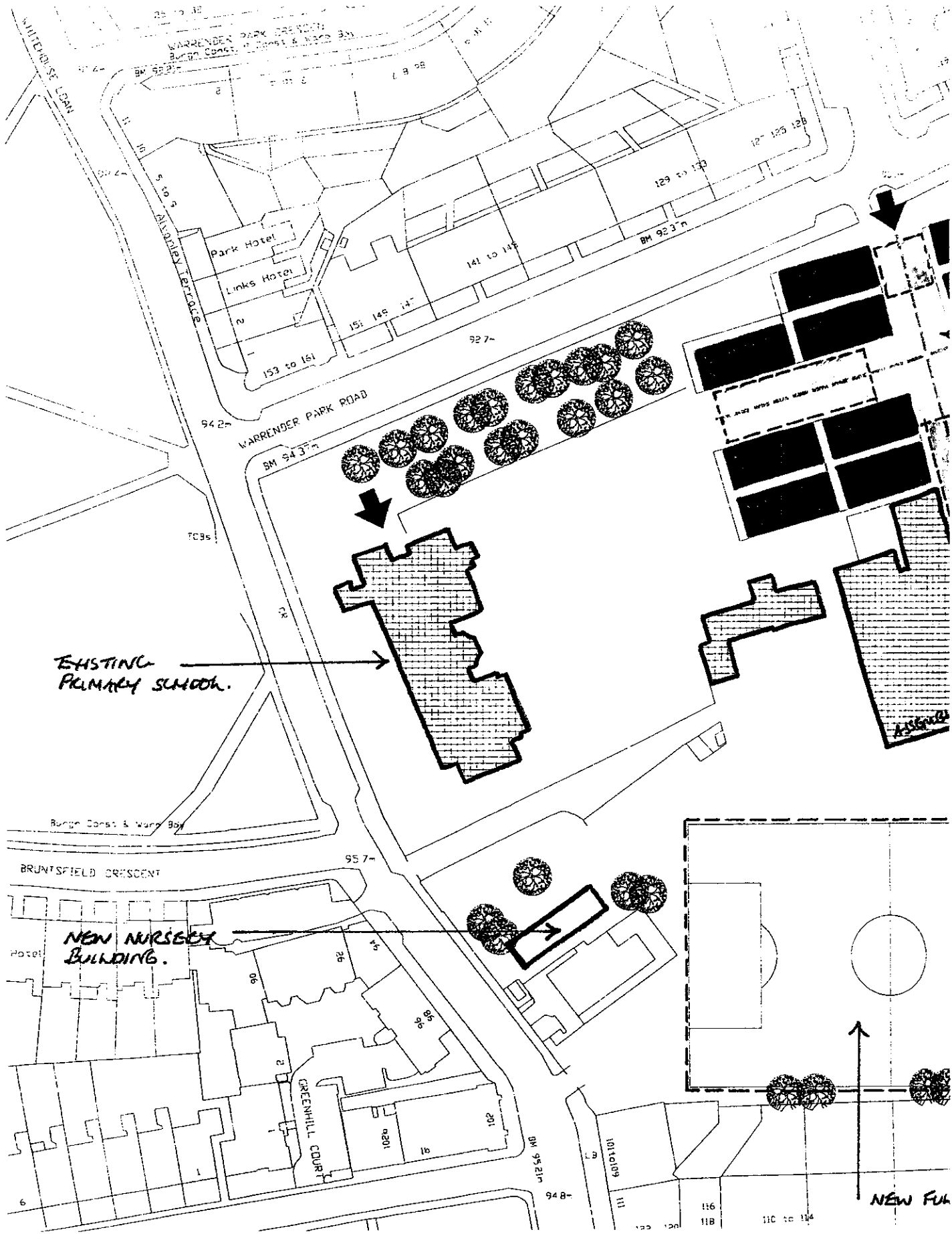
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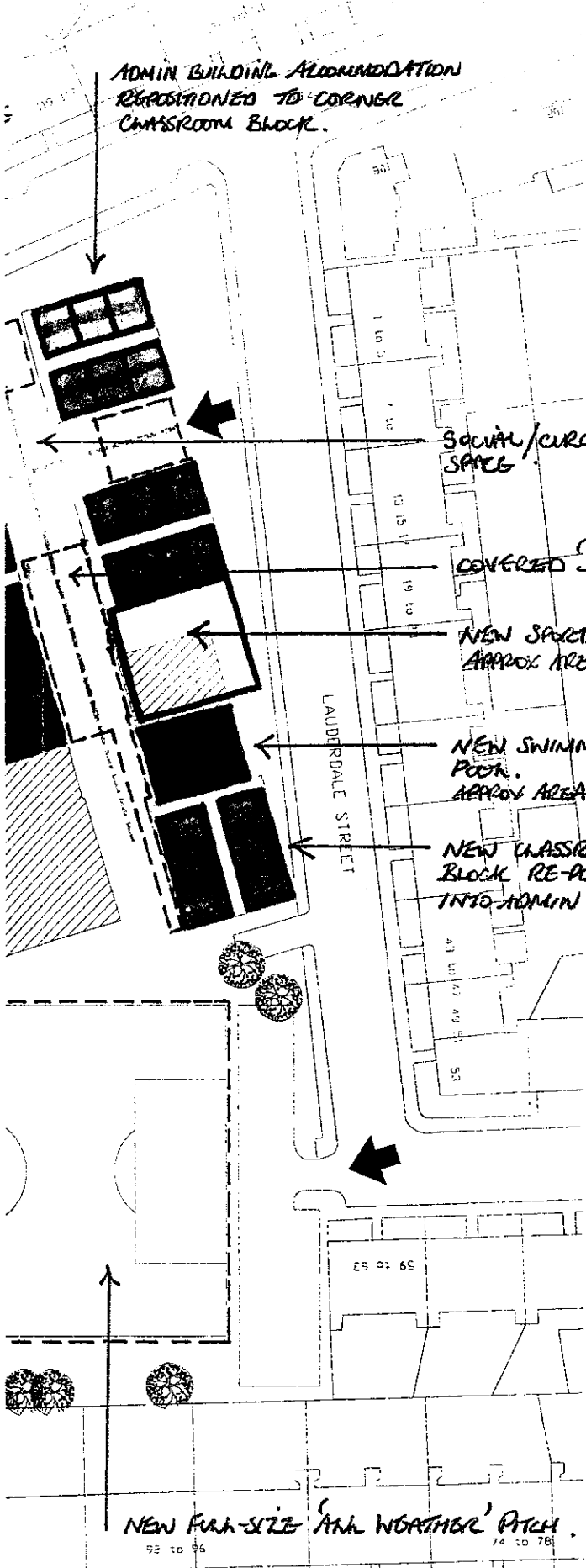
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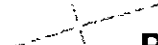











5 PROPOSED SOLUTION

5.2 Design Proposals

5.2.4 Phase 3

Phase 3 will see the final demolition and re-provision of all the larger facility spaces, which include the assembly hall/performance space, drama block, swimming pool etc. The administration centre can also be re-positioned closer to the new school entrance at this time.



-  Site access points
-  Existing trees
-  Primary access/circulation routes
-  New-build classrooms
-  New-build boilerhouse
-  New-build community block
-  New-build arts/drama block
-  New-build assembly block
-  Temporary classroom units
-  New-build admin block
-  New-build nursery block
-  Existing buildings
-  Buildings to be demolished
-  New sports hall

PROJECT
JAMES GILLESPIE'S HIGH SCHOOL.
 TITLE
SITE PLAN - PHASE III (COMPLETE).
 CLIENT

JOB No.
4276
 SCALE
1-1250.
 STATUS

DRAWING No.
L(6)0009.
 DRAWN BY
SC.
 REVISION
 CHECKED BY
 DATE

JAN 2008.

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5 PROPOSED SOLUTION

5.3 Planning Issues

Initial discussions have been held with the Planning Department. The general feedback about the proposals was positive and it has been confirmed there would be no objection in principal to the proposed new buildings. The proposed new site entrance was encouraged, as was the use of modern forms of construction; traditional masonry construction in similar form to the surrounding tenement buildings was not seen as necessary.

It was emphasised by Planning that care would need to be taken over any proposals for Bruntsfield House due to its listing. It was also commented that the distance between the site boundary and the proposed all-weather pitch should be maximised to ensure light and noise pollution issues are minimised for local residents.

It was noted that only the minimum required parking provision would be permitted.

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5 PROPOSED SOLUTION (cont)

5.4 Not Used

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5 PROPOSED SOLUTION (cont)

5.5 Site Issues (cont)

A desk-top site investigation has been carried out and the findings are detailed in the Civil & Structural Engineering Desktop Assessment Report included in Appendix B. The Civil/Structural issues which should be given consideration in assessing the feasibility of the specified site for a proposed education development are as follows.

- The site is predominantly level and bounded by public roads on three sides with private residential on the fourth side. The site is moderately populated with the open space consisting of hard and soft landscaping; there are also bands of mature trees that we would require approval prior to being altered or removed.
- In the centre of the site is Bruntsfield House, being A-Listed, along with the stone boundary walls any future development proposals would require to take cognisance of this.
- The site is currently served by existing combined system (foul and surface water) public drainage beneath the roads surrounding the site. It is assumed that the potential school redevelopment would have equivalent occupancy to the buildings which are to be replaced and would therefore be adequately served by the existing infrastructure.
- As the site is already in use as a school, all public utilities are currently supplied to the site. Capacities of these utilities should be adequate to meet the new proposals, but would require to be checked once proposals are confirmed.
- Any options that remove the existing Boiler House near the north east corner of the site will require the electricity substation to also be replaced. Further, the Primary School would appear to be served from this substation so redevelopment would have to include the continued supply to these buildings along with the remaining buildings on the High School site.
- As a result of the electricity substation, at the Boiler House, contamination of the subsoil with PCBs may have occurred and as such allowances should be made for localised decontamination in this area. Further, should any new development be proposed adjacent to the Whitehouse Loan substation then an allowance should also be made in this area for increased investigation and possible decontamination.
- It is assumed at this time that the proposed development would be adequately served by existing public utilities.

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5 PROPOSED SOLUTION (cont)

5.5 Site Issues (cont)

- It has become normal practice in recent years for Scottish Water & the Scottish Environment Protection Agency (SEPA) to discourage the discharge by new and extended developments of surface water into combined sewerage systems where possible. This has increasingly led to the adoption of Sustainable Urban Drainage Systems (SUDS) to dispose of surface water closer to source. These might typically comprise areas of hardstanding constructed with porous pavement, infiltration drainage and attenuation ponds or basins with controlled discharge. Such SUDS measures would necessarily occupy areas of hard or soft landscaping. Given the tight site, availability of space for SUDS solutions should be given due consideration.
- Any refurbishment and alterations to the existing High School buildings should be relatively straightforward with regards to the structure, with the exception of Bruntsfield House where Planning Restrictions will dictate any changes.
- The construction of new school buildings, probably three storeys in height, would probably be founded on traditional strip and pad concrete foundations at or below the level of the existing building footings. It should however be noted that as a result of grubbing up the existing building footings during demolition and site clearance, any new foundations may require to be taken to deeper to undisturbed ground.
- Also, any redevelopment in the vicinity of the existing swimming pool will require greatly increased depths of foundation, this may actually suit a new layout with regards locating Plant Rooms, or a new Boiler Room.
- Any new buildings that are to be formed in the land between the Primary School and Bruntsfield House buildings should take cognisance of an increased risk of buried foundations from historical, now demolished buildings. As such, additional grubbing up and deepened foundations may be required.

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5 PROPOSED SOLUTION (cont)

5.6 Risk Analysis

A Risk Review Workshop was held with the Project Team, which was also attended by a representative of the Children and Families department. The purpose of this workshop was to identify the key project risks at this stage relative to the design procurement and construction of the proposed new school building. The attached risk register summarises the findings of this workshop.

A weighting has then been applied based on the 'probability' of the risk occurring and, where possible, the assessed financial impact of the risk occurring. This process has allowed a recommended Risk Allowance to be identified and this is included in the capital costs accordingly.

The risk register identifies the most significant project risks as being as follows:



- The disruption to classes and the health and safety risks associated with the proposed on-site decanting and phasing of the works.
- The anticipated difficulty in attracting a suitable contractor to carry out the works due to a combination of buoyant market conditions and the nature of the works.

It is recommended however that all identified risks be closely managed as the project progresses.

RISK REGISTER - OPEN

ability	Risk Factor	Trigger	Notes/Comments	Mitigation Costs or evaluation details	Residual Risk £k	Risk Controller	By When
	2	8	capital cost allowance made only assuming 1 year delay (5.5% per annum)				
	2	8	capital cost allowance made only based on construction programme (1% per annum)				
	2	8	desk top SI carried out				
	5	10					
	3	3					
	2	4	construction cost allowance benchmarked to ensure robust allowance made				
	2	6	CEC management issue				
	2	6	contingency sum to be allowed				
	2	4	initial discussions held with Planners, appropriate design enhancement allowance made within costs				
	2	8	assumed 6 month delay to programme				
	2	8	consultation with utilities providers to be carried out as soon as possible				
	3	9	design proposals allow for decant to be continued within site; cost of accommodation included in report costs				
	5	20	careful planning and management of design and construction phase required				
	4	16	contingency sum to be allowed				
	3	9	CEC management issue				
	4	8	CEC management issue				
		0					
		0					
		0					
		0					
		0					
		0					
		0					
		0					
CONTINGENCY ALLOWANCE							

Risk Factor = Max. Severity X Probability

Trigger 0 to 5 
 6 to 11 Amber
 12 & over 



thomas and ADAMSON

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5.7 Programme for Implementation

Consideration has been given to the likely timescales required to take this project forward on the basis of a 'traditional' procurement route being adopted. The following programme considers this as a stand alone project and outlines the key stages in the design, procurement and construction of a project of this size and nature.

The programme developed shows an indicative design, procurement and construction period of 6 years from the point of initiating the design team procurement.

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APPENDIX A

JGHS Feasibility Study – School’s Requirements

Following the meeting held at James Gillespie's High School on 11th November 2007 with the Feasibility Study Team the school agreed to list what it sees as its main requirements for the school of the future. The requirements listed below are aimed at maintaining James Gillespie's position as the best and most sought after high school in Edinburgh (The Scotsman Newspaper, 15th December 2007).

- Additional, flexible classroom spaces sufficient for each teacher to have a dedicated one. This allows better preparation for and setting up of classes and displays of class work.
- All classrooms should be large enough to accommodate the need for computer use and fitted with latest generation ICT equipment (e.g. SmartBoards or next generation equivalents).
- All classrooms should have ample lockable storage space and shelving.
- Departmental staff bases should be provided with adequate work space and storage appropriate to the size of the department.
- Modern, energy efficient, environmentally friendly, low carbon footprint buildings. These should be low/easy maintenance buildings (e.g. lighting that does not require scaffolding to change, self-cleaning glass, etc.).
- There should be one, or a strictly limited number of entrances to campus and buildings with marked access routes.
- An Administration/Senior Management suite near to the main entrance/reception area. A separate reception facility should be immediately adjacent.
- A room or space needs to be made available adjacent to the Senior Management suite to hold children temporarily for disciplinary or other reasons.
- A Support for Pupils/Welfare suite should be provided near to the main entrance/reception area.
- Separate reprographics room to keep noise to a minimum.
- Sufficient, accessible storage for documents/archives.
- Staff room sufficiently large to provide relaxed, casual seating for all staff.
- Staff kitchen to allow staff to heat up food and to allow school to provide food/drink for meetings.
- Meeting rooms should be incorporated throughout the building to allow for staff meetings, staff/parent meetings and to provide areas that may

be used by Special Needs students requiring readers and scribes for their SQA examinations.

- Dining room of sufficient size to accommodate our students with flexible seating arrangements. This should include facilities to allow multiple serving areas with multiple food types.
- A Tannoy type messaging system installed in all rooms to allow for whole school announcements and which has the facility to be selective in its recipients.
- A public, visual messaging system in each room that would allow information to be displayed passively, e.g. cover lists, diary information, whole school activities, etc.
- A library of sufficient size for the display and stocking of books, with sufficient space for electronic research facilities using computers. The layout should allow for "multi-tasking" in that classes should be able to use the facilities and have some level of discussion about their research topics while allowing other users to make use of the facilities without distraction.
- Facilities for use in vocational training of students.
- Student toilets should all be on ground floor to avoid the need for students to be wandering around the building during breaks.
- Sufficient lockers should be provided for all students on the ground floor and in areas where their use does not restrict circulation.
- Sufficient changing and shower facilities should be provided for staff together with adequate locker storage for clothes.
- The campus feel should be maintained as it contributes to the ethos of the school. This should include hard standing public areas for students to mix and congregate, green areas, and with trees in proportion to the site. Changes in level over the site should be maintained and should include garden/contemplative areas.
- The design of the building should contribute to the campus feel allowing students a variety of areas to meet in. A monolithic block should be avoided.
- Car parking should be retained at its current or increased level.
- Secure, weather-protected areas should be provided for a significant number of bicycles.
- Covered area for students to use during inclement weather.
- An upgraded Assembly Hall/Performance space with full theatre facilities. This should also be a rentable space. This should be fully connected to our ICT networking facilities to allow use of server based materials to be projected/recorded. It should allow a data stream to the Media Editing Suite.
- Music Department isolated from rest of school with recording studio facilities, sufficient breakout rooms for individual practise and tuition,

adequate staging/practise areas for orchestra sized groups, suited rooms (e.g. percussion suite, woodwind suite, etc.), adequate storage for a full range of large instruments. Music in JGHS is proportionately a large department compared to school roll and this should be borne in mind to avoid a shortage of space that may result from a formulaic calculation of rooming requirements based on school roll.

- Retain the studio/open plan facilities within the Art department and well glazed, bright environment for painters. ICT Suites to allow for computer-based art work. Area for kiln and specialized art equipment. Sufficient storage space for materials.
- Drama/Media department has different requirements for classroom space needing larger rooms to accommodate performance-based activities. A media editing suite is required.
- Workshop facility for Computing department to allow for vocational training in computer repairs.
- Improved ICT lab facilities. At least one in each faculty area that could be shared by all departments in the facility to improve accessibility.
- Modern Languages department should have language laboratory facilities with listening, recording, equipment.
- Science labs should be modern, up to date and incorporate all of the latest ideas in lab design (e.g. sufficient sinks, moveable benches, etc.).
- Sufficient storage space should be provided for science lab equipment together with a room for growing plants, i.e. large glass-area room.
- Improved storage areas should be available throughout the school for teaching departments, janitorial use and for cleaning services.
- There should be a segregation of workshop areas and classroom/design areas in the Design Technology department. This would allow full use of machinery and workbenches for practical work while providing drawing tables and computers in a clean classroom environment.
- A fully equipped workshop should be provided for the workshop technician. This should incorporate suitable storage of the correct type for a variety of materials (e.g. lengths of wood, board, metals).
- Full sized, fully equipped Games Hall with sufficient storage and lighting that does not require scaffolding to change.
- Full size gym/dance studio.
- Fitness room.
- Full sized, floodlit Astro turf.
- Football/Rugby, Hockey pitch.
- A minimum of 8 changing rooms/shower facilities

- PE classrooms, fitted with up to date ICT/teaching technology for classroom based elements of PE courses.
- PE Staff showering/changing rooms.

feasibility study – james gillespie's high school

Chartered Quantity Surveyors : Building Surveyors : Project Managers : CDM Co-ordinators

CITY OF EDINBURGH COUNCIL

**JAMES GILLESPIE'S HIGH SCHOOL
FEASIBILITY STUDY**

APPENDIX B

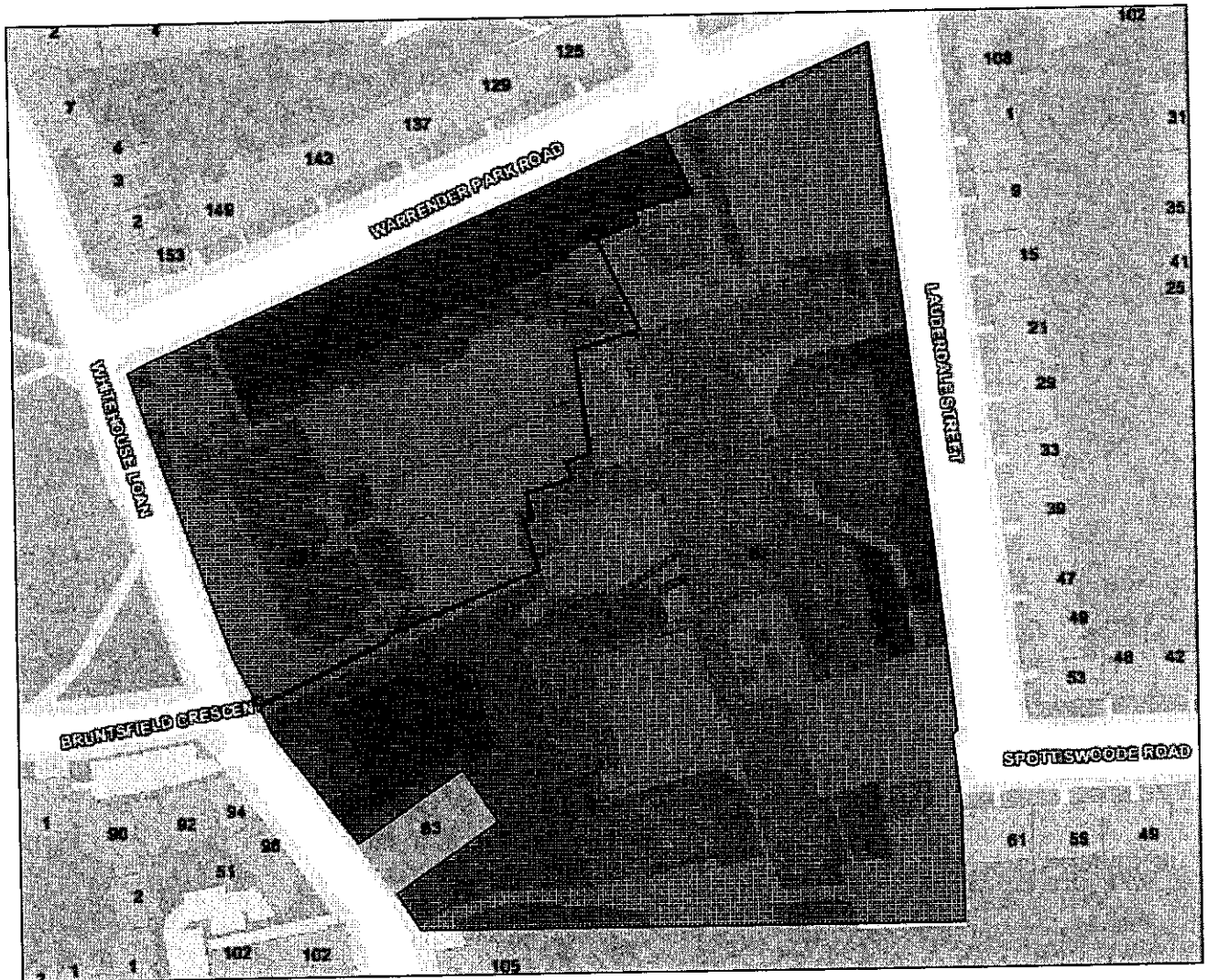
City of Edinburgh Council Feasibility Study (Architectural) Civil & Structural Engineering Desktop Assessment Report



James Gillespie High School

Feasibility Proposals

A variety of feasibility proposals have been considered for the High School involving differing approaches to phasing new build & demolition, and refurbishment of existing buildings to minimize disruption to the existing educational facilities.

For the purposes of the Desktop Study we have overviewed both the High School and Primary School plots together and will discuss the various aspects tabled for new build & demolition, and refurbishment in the Development Considerations.



-  James Gillespie High School
-  James Gillespie Primary School & Nursery

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James Gillespie High School

Topography

The existing High School and Primary School sites are situated between Whitehouse Loan, Warrender Park Road, Lauderdale Street and the rear of the properties to Thirlestane Road. The site is currently occupied by James Gillespie High School on the southeast quadrant and James Gillespie Primary & Nursery on the northwest.

Around the boundaries of the sites are four / five storey high Georgian tenement residential buildings all constructed circa 19th & early 20th centuries, to the west of the Primary School is open parkland, Bruntsfield Links.

Both the Primary & High School sites are relatively flat with no major steps in level noted. The undeveloped areas of the sites are a combination of soft and hard landscaping with much of the soft landscaped areas containing mature trees.

At the centre of the sites is the Grade A Listed Bruntsfield House constructed late 16th century with 18th, 19th and 20th century additions and alterations, this Listing also includes all of the high coped rubble boundary walls around the two sites and down to Bruntsfield House from Whitehouse Loan.

The High School buildings, constructed circa 1970's are a mix of single, two and three storey buildings predominantly constructed from ribbed concrete floor slabs supported on a reinforced concrete frame with external brickwork cladding. Internal walls are constructed from blockwork with plaster 'on hard' finishes. During the 1990's the Gym Hall to the east of the site was built, constructed from a flat 'Glulam' timber beam roof supported on loadbearing brickwork diaphragm walls.

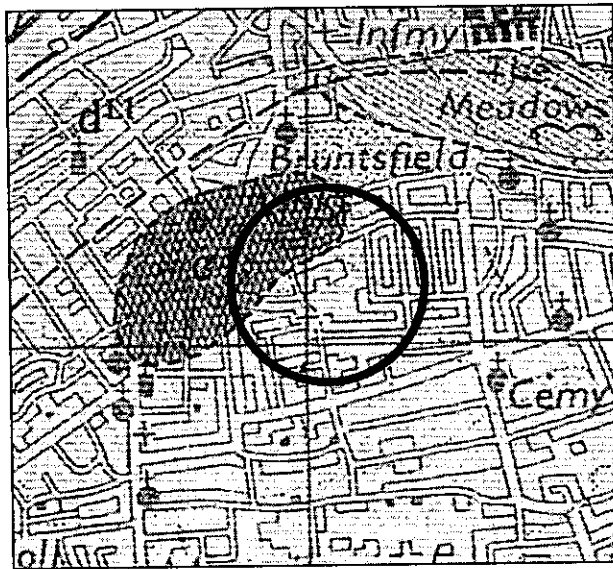
The Primary School building, built late 1970's is a mix of single and two storey buildings constructed from precast concrete floors supported on loadbearing masonry walls.



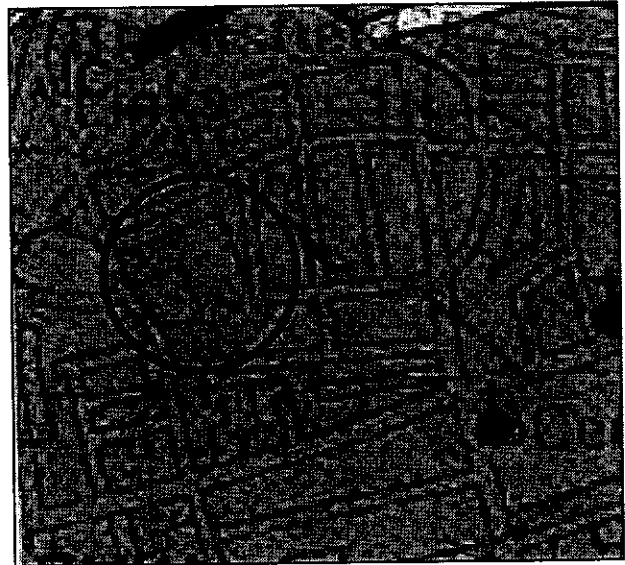
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James Gillespie High School

Geology



Drift Geology



Solid Geology

Investigating the Drift Geology from the British Geological Survey (BGS) Maps reveals that the area is underlain by Boulder Clay from the Recent & Pleistocene period.

Investigating the Solid Geology from the BGS Maps reveals the area is underlain by rocks from the Kinnesswood Formation consisting of pink and red Sandstone, partly pebbly with calcrete dipping down at approximately 15 degrees to the north northwest. There are no distinct fault lines within the vicinity of the site.

The depth to rockhead, at the site, is not known for certain but is expected to be in the order of 10 metres.

The sites lie within an area of Moderate to Nil Potential for Compressible Ground Stability.

The sites lie within an area of Very Low to Nil Potential for Running Sand Ground Stability.

The sites lie within an area of Very Low to Nil Potential Shrinking or Swelling Clay Ground Stability.

Mining

The site lies within an area not considered to be within the zone of likely physical influence from any past, present or future underground or opencast mining activities. Certification will be available from the Coal Authority to confirm this, if required.



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James Gillespie High School

Site History

From the desktop study information available, the historical land uses on and around the proposed development site are as follows:

- 1855 - 1877 Bruntsfield House, a Lodge, Sunday School and Ice House are indicated on the site in amongst Coniferous and Non-Coniferous trees. Whitehouse Loan and Warrender Park are present on the boundaries along with the residential buildings to Warrender Park and Thirlestane Road.
- 1896 No apparent change to the plot or surrounding area.
- 1908 - 1909 The Sunday School has gone. Spottiswoode Street and the residential tenement buildings either side of it have appeared to the east of the site boundary.
- 1914 - 1920 No change on the site. Lauderdale Street and some of the terrace of residential tenement buildings have appeared on the east boundary.
- 1931 The north east corner of the site is indicated as Allotment Gardens. The terrace of residential tenement buildings on Lauderdale Street has been completed.
- 1947 – 1956 A building has appeared on the location of the Primary School along with three rows of buildings to the north west of Bruntsfield House, which has itself been extended to the east. The Ice House has gone, replaced by two buildings and the south most portion of the site is indicated as a Nursery.
- 1966 No apparent change to the plot or surrounding area.
- 1969 The James Gillespie's High School (Girls) buildings have appeared along with an Electricity Sub Station at the west boundary. The Allotment gardens are noted as Tennis Courts
- 1988 - 1989 No apparent change to the plot or surrounding area.
- 1993 The Gym Hall has been added to the High School. The buildings in the north west corner have been replaced by James Gillespie's Primary School. The Tennis Courts have been replaced by a Sports Pitch
- 1999 The Electricity Sub Station has been replaced by another building, still noted as the Whitehouse Loan Electricity Sub Station on the Scottish Power record drawings.
- 2007 No apparent change to the plot or surrounding area.



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James Gillespie High School

Hydrology & Ground Water Vulnerability

The sites lie within an area that is not at risk of flooding from any watercourses and has a low vulnerability to Groundwater

Sensitive Land Uses

The site lies within an area that is indicated as not having any Sensitive Land Issues

Environmental Considerations

From the current and historical uses of the site there is no evidence to suggest that there could be any geochemical aspects that would be considered problematic for redevelopment, albeit a full environmental assessment would be required on the underlying strata for Statutory Consents.

It has been noted from the map information that buildings existed between the Primary School and Bruntsfield House, depending on the manner in which they were demolished there may be localised contamination from the arisings.

Public Utilities

The City of Edinburgh Council (Street Lighting) records show that there are Light Standards and cables in the near footpath of Whitehouse Loan and Warrender Park Road and a cable in the footpath of Lauderdale Street.

Scottish Power records show that the Gillespie High School Substation is located in the north east portion of the site, at the School Boiler House, cables serving this traverse the site north and east and there are cables that run westward past the north end of the Primary School building. On the boundary there are cables in the near footpath of Lauderdale Street. At the south west corner of the site there is the Whitehouse Loan Substation, this is effectively outside the school boundary, and there are numerous cables in the near footpath and road of Whitehouse Road.

Transco records show the site as being mainly clear, service to two of the High School buildings and one to the Primary School building from perimeter roads.

BT records show Joint Boxes located at the site boundary and several underground spurs to the school buildings; there is also an overhead cable from the south serving Bruntsfield House and the Primary School.

Thus records show that the site is clear, but there is a cable in the near footpath of Warrender Park Road at the north east corner of the site.

Virgin Media records show that are spurs for both the High School and Primary School

Scottish Water (Drainage) records show that there is no active public drainage beneath the site; there are Combined Sewerage pipes below the road in Warrender Park Road and Lauderdale Street.

Scottish Water (Supply) records show that the site is clear.

City of Edinburgh Council Feasibility Study (Architectural) Civil & Structural Engineering Desktop Assessment Report

James Gillespie High School

Development Considerations

The Civil / Structural issues which should be given consideration in assessing the feasibility of the specified site for a proposed education development are as follows.

The site is predominantly level and bounded by public roads on three sides with private residential on the fourth side. The site is moderately populated with the open space consisting of hard and soft landscaping; there are also bands of mature trees that we would suspect are protected by Tree Preservation Orders.

In the centre of the site is Bruntsfield House, being A – Listed, along with the stone boundary walls any future development proposals would require to take cognisance of this.

The site is currently served by existing combined system (foul and surface water) public drainage beneath the roads surrounding the site. It is assumed that the potential school redevelopment would have equivalent occupancy to the buildings which are to be replaced and would therefore be adequately served by the existing infrastructure.

As the site is already in use as a school all public utilities are currently supplied to the site. Capacities of these utilities should be adequate to meet the new proposals, but would require to be checked once proposals are confirmed.

Any options that remove the existing Boiler House near the north east corner of the site will require the electricity substation to also be replaced. Further, the Primary School would appear to be served from this substation so redevelopment would have to include the continued supply to these buildings along with the remaining buildings on the High School site.

As a result of the electricity substation, at the Boiler House, contamination of the subsoil with PCB's may have occurred and as such allowances should be made for localised decontamination in this area. Further, should any new development be proposed adjacent to the Whitehouse Loan substation then an allowance should also be made in this area for increased investigation and possible decontamination.

It is assumed at this time that the proposed development would be adequately served by existing public utilities.

It has become normal practice in recent years for Scottish Water & the Scottish Environment Protection Agency (SEPA) to discourage the discharge by new and extended developments of surface water into combined sewerage systems where possible. This has increasingly led to the adoption of Sustainable Urban Drainage Systems (SUDS) to dispose of surface water closer to source. These might typically comprise areas of hardstanding constructed with porous pavement, infiltration drainage and attenuation ponds or basins with controlled discharge. Such SUDS measures would necessarily occupy areas of hard or soft landscaping. Given the tight site, availability of space for SUDS solutions should be given due consideration.

Cont'd



**City of Edinburgh Council Feasibility Study (Architectural)
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James Gillespie High School

Any refurbishment and alterations to the existing High School buildings should be relatively straightforward with regards to the structure with the exception of Bruntsfield House where Planning Restrictions will dictate any changes

The construction of new school buildings, probably three storeys in height, would probably be founded on traditional strip and pad concrete foundations at or below the level of the existing building footings. It should however be noted that as a result of grubbing up the existing building footings during demolition and site clearance, any new foundations may require to be taken to deeper to undisturbed ground.

Also, any redevelopment in the vicinity of the existing swimming pool will require greatly increased depths of foundation, this may actually suit a new layout with regards locating Plant Rooms, or a new Boiler Room.

Any new buildings that are to be formed in the land between the Primary School and Bruntsfield House buildings should take cognisance of an increased risk of buried foundations from historical, now demolished buildings. As such, additional grubbing up and deepened foundations may be required.