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CONSERVATION DEVELOPMENT STRATEGY FOR THE **UNIVERSITY OF EAST ANGLIA**



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CONSERVATION DEVELOPMENT STRATEGY FOR THE UNIVERSITY OF EAST ANGLIA

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PREFACE

The Conservation Development Strategy covers the site and buildings of the main campus of the University of East Anglia.

It was commissioned by the Estates and Buildings Division of the University of East Anglia and prepared by Cambridge Architectural Research Ltd between April 2004 and April 2006. The CAR team working on the project comprised Dr William Fawcett and Katie Thornburrow, architects who have collaborated on several previous conservation plans; Dr Stephen Platt, a social scientist who was responsible for the opinion survey; and Barnabas Calder, a doctoral student working on Denys Lasdun. The architectural historian Professor Andrew Saint was consultant to the project team and Dominic Cole of Land Use Consultants contributed to the landscape sections. Joseph Saunders, UEA's Estate Development Director, was Estates Representative for the project.

The project was carried out in three stages. The Research stage involved studies of the site and buildings, visits to comparable buildings, review of information in publications, archive research, interviews with experts and interested parties, and an opinion survey of the University community. The Drafting stage involved collating and assembling the material into the first draft of the Conservation Development Strategy; and the Review stage involved consultations with experts and interested parties, and the production of revised drafts taking account of feedback.

Input to the project and comments on the drafts of the Conservation Development Strategy were received from:

English Heritage
Norwich City Council
Norwich Society
Twentieth Century Society
Yare Valley Society
Foster & Partners

LSI Architects

Rick Mather Architects

John Miller & Partners

RH Partnership

Jules Lubbock, University of Essex

Stefan Muthesius, University of East Anglia

Christ's College, Cambridge

Royal College of Physicians.

We were given access to the Lasdun archives held by the RIBA Library and Lady Susan Lasdun.

Additional insights were provided by former associates and employees of Denys Lasdun's practice: Charlotte Baden-Powell, Anthony Collins, Ted Cullinan, Gordon Forbes, Christopher Harris, Adam Kawecki, John Loring, Peter McKinley, David Russell and Maurice Taylor. Their recollections and the materials they made available were both fascinating and valuable.

The project was guided by an Advisory Group with the following members:

Philip Insley (Conservation and Urban Design, Norwich City Council)

Michael Sanderson (Historian, UEA)

Jon Cook (Faculty of Arts and Humanities, UEA)

Jean Steward (Information Services Directorate, UEA)

Janet Havers (Dean of Students Office, UEA)

Roger Bond (Estates Division, UEA)

Martyn Newton (Estates Division, UEA)

Tony Evans (Estates Division, UEA)

Many other people at UEA helped in providing information, answering questions and assisting with access to the buildings.

The contributions of all these organisations and individuals is gratefully acknowledged.

Particular acknowledgement must be made to two publications which contain a wealth of detailed information about UEA, *The History of the University of East Anglia Norwich* by Michael Sanderson (2002), and *Concrete and Open Skies* by Peter Dormer & Stefan Muthesius (2001). We used these sources so many times that it would have been impossible to insert references on each occasion.

INTRODUCTION

Scope and objectives

The University of East Anglia (UEA) was founded in 1960, admitted its first students in 1963, and is now a large and successful university. It draws academics, students and visitors from all over the world, and plays a central role in the economy and community life of Norwich. The mission of the University is to ‘advance learning and the increase of knowledge both to satisfy the aspirations of individuals and to contribute to economic, social and cultural progress at regional, national and international levels.’

The future success of UEA relies on continuing growth in academic activities and student numbers, and this in turn relies on constant adaptation and expansion of the University’s buildings. The University must plan for future development of the estate, but recognises the need to remain sympathetic to the architectural and landscape significance of its buildings and site. To assist in achieving these objectives the University commissioned a Conservation Development Strategy in order to identify ways of developing the estate which will maintain its significance. This has many aspects including:

- retaining the character and quality of the significant architectural and landscape elements;
- considering adaptations and compatible new elements which will make the University more effective in its fundamental purpose;
- identifying opportunities for growth and change;
- identifying elements which adversely affect the University and which are in need of modification or removal;
- providing an approach to maintenance and the replacement of deteriorated elements;
- drawing attention to the need for co-ordination and continuity of conservation decisions.

The Strategy sets out principles and policies for the care of the University estate, and identifies opportunities for development, but does not present fully worked-out plans for refurbishment or new development. Any proposed action should be developed and evaluated with reference to this Strategy.

The Strategy deals with conservation issues, but conservation is only one factor that must be taken into account when the University is planning or carrying out work to the estate; other factors would include academic priorities, funding, traffic, environmental impact, etc, within the University's over-arching Corporate Plan. This Strategy, therefore, does not constitute an overall development plan for the University, but provides guidance on how this should be approached.

The Strategy identifies opportunities for change at UEA, and in this respect it is more ambitious than a typical conservation plan. A conservation plan restricts itself to reviewing the present situation, and is then referred to when proposals for change are brought forward as a separate exercise. The Strategy can fulfil exactly the same role as a typical conservation plan, but by adding opportunities for change it mitigates the planning uncertainty faced by UEA due to the significance of its existing building stock.

It is important to note that the Strategy gathers together principles of good practice. The proposals are not all novel and many are already part of current practice at UEA. In these cases the Strategy aims to reinforce the present situation and ensure it continues.

It is most important that the Conservation Development Strategy should be a practical guide for action. It reflects a range of present-day informed opinion on conservation-related issues at UEA and, subject to resource and timescale constraints, it is believed that its proposals are practical and realisable.

Listing review

Even though the oldest buildings on the UEA campus are forty years old, their status as iconic examples of modern British architecture is well-established. This status was confirmed when parts of the campus were added to the statutory list of 'Buildings of Special Architectural or Historic Interest' in late 2003. The Library and Teaching Wall were listed Grade II, and the residential ziggurats were listed Grade II*, which is exceptional for modern buildings. Under

current legislation, this means that listed building consents have to be obtained for alterations to these buildings.

The statutory procedures for managing historic buildings are currently under review by English Heritage, with the objective of finding a simpler and more effective system than repeated listed building consents. As part of the review, alternative management procedures are being tested at case study sites. UEA is one of the case studies, and this Conservation Development Strategy project is being carried out in consultation with the English Heritage project team.

New legislation resulting from the current review is unlikely to be enacted for some years, but the Strategy should form the basis for a constructive working relationship with Norwich City Council, South Norfolk District Council and English Heritage under current legislation.

How the Strategy is organised

The Conservation Development Strategy is a novel approach to conservation planning, although it is based on the well-established ideas of conservation plans, which are promoted by English Heritage and the Heritage Lottery Fund, and derive from the pioneering work in Australia by J S Kerr.

The Strategy is in five sections:

Section 1, 'Understanding', describes the building history of the University in a chronological sequence, including a discussion of the social and economic factors which explain the present character of UEA. The architectural and landscape significance is evaluated.

In Section 2, 'Issues', discusses the pressures that might lead to loss of significance, if not managed appropriately. Experience of other buildings and sites which are facing similar pressures are reviewed.

Section 3, 'Strategy', begins with a statement of general Principles that will enable UEA to respond to pressures for growth and change without losing significance. Then the individual parts of the University are considered. The significance of each of the main elements is assessed, then special observations are noted and, where appropriate, Policies are set out indicating how the general Principles should be applied. These Policies are cross-referenced to the relevant Principles. The assessments of individual elements are intended to identify

significance and do not constitute an exhaustive survey, which falls outside the scope of the Conservation Development Strategy. This section concludes with a methodology for using the Conservation Development Strategy for impact assessment.

Section 4 describes the main sources of information about the buildings and landscape of UEA. This includes the statutory listing statements.

Section 5 contains plans showing the site and key buildings at UEA.

How to use the Strategy

The Conservation Development Strategy is intended for a wide readership, on the proposition that the better the University estate is understood, the better it will be appreciated and therefore treated. All users should therefore benefit from reading Section 1, 'Understanding', even if their particular interest is focused on one part of the University.

Readers who are concerned with the broad issues of conservation at UEA should read the whole of Section 2, 'Issues'. Other readers might prefer to return to Section 2 after using relevant parts of Section 3, 'Strategy'. However, all readers should aim to digest the basic information in Section 2.

Readers who are concerned with particular elements should refer to the relevant entry in Section 3 before referring back to Section 2.

If readers want to follow up any points in the Conservation Development Strategy in more detail, Section 4 gives a list of published sources referred to in the preparation of the Strategy, and also identifies locations with other material specifically related to the buildings and site.

The plans are grouped in Section 5 so that they can easily be referred to whenever needed.

Updating the Strategy

Some aspects of the Conservation and Development Strategy should remain valid for a long time, but others will become superseded by new developments. It is important that the Strategy is systematically updated to ensure that it does not become irrelevant. New issues of the Strategy should be clearly marked and dated, and distributed to all interested parties.

SECTION 1

UNDERSTANDING

This section describes the building history of the University in a chronological sequence, including a discussion of the social and economic factors which explain the present character of UEA. The architectural and landscape significance is evaluated.

The origins of UEA

Universities and the Welfare State

After World War II Britain embarked on the creation of a Welfare State to eradicate five evils – poverty, idleness, disease, squalor and ignorance – that had afflicted the lives of so many during the inter-war depression (Timmins, 1995). It was a huge enterprise and had overwhelming public support. Everyone assumed that the state would take the lead, just as the state had led the mobilisation of Britain in wartime.

As with all aspects of British life, it was anticipated that the universities would undergo radical transformation. However, in the 1940s and early 1950s the universities were a relatively low priority, compared, for example, to the National Health Service, the New Towns and the expansion of primary and secondary schools. This was because children from the new Welfare State schools would not reach university age until the 1960s.

The university sector was starting from a modest base: at the end of WWII there were around 50,000 students in British universities, of which a quarter were at Oxford and Cambridge, a quarter at London University, and a quarter at the Scottish universities, with the remainder at the Welsh and ‘redbrick’ universities. Anticipating spectacular growth, many cities thought that they should have a new university, and numerous local committees and pressure groups were formed. At the same time, non-university higher education institutions sought university status and the existing universities developed ambitious expansion plans. All these groups looked to the government body that dealt with universities, the University Grants Committee.

The University Grants Committee (UGC) was a small cog in the large Treasury machine (Carswell, 1985). Established in 1919, its role was to identify the financial needs of the universities, obtain funds from the Treasury, and distribute grants to the individual universities. Because it was accepted that universities were independent and self-governing, the UGC played no role in directing what universities actually did, despite providing most of their funding. The UGC’s most powerful lever was the control of capital projects: academic

expansion normally required new buildings, so UGC decisions on the funding of construction determined which developments went ahead.

During the 1950s the UGC approved development projects to meet the expected need for growth. Their favoured method was the expansion of existing universities, because this could achieve results more quickly and cheaply than starting from scratch. Under this policy the number of university students rose to 130,000 by 1960, but with the increasingly urgent pressure of numbers the UGC decided to fund a small number of new universities. This also gave a better geographical spread of universities and met the prevailing desire for innovation. Norwich was one of the cities that successfully lobbied for a brand new university. The others were York, Lancaster, Brighton (University of Sussex), Coventry (University of Warwick), and Colchester (University of Essex). At Bath and Canterbury (University of Kent) existing higher education colleges were upgraded to university status and rebuilt on new sites. The names of the chosen cities had a Shakespearean ring, in contrast to the industrial cities with 'redbrick' universities, suggesting historic and even romantic aspirations.

The UGC's decision in favour of Norwich was made in April 1960. It was a momentous step but the job of creating a new university was just beginning.

From dream to reality

The creation of a new university at Norwich owed a great deal to the enthusiasm and efforts of local people over many years. A memorandum had been submitted to the UGC in 1947, and in 1958 the local initiative was reactivated and a Promotion Committee formed, which secured the support of local government, industry and influential local figures. Some funds were raised, and a site owned by the City Council near Earlham Hall was earmarked. The name 'University of East Anglia' was also chosen, rather than University of Norwich or Norfolk, to gain broader regional support. The Promotion Committee was chaired by Lord Mackintosh, a prominent local businessman; Gordon Tilsley, the Town Clerk of Norwich, acted as chief administrator until the appointment of the university's first full-time Registrar in 1962.

The serious business of the new university began in the summer of 1960 when the UGC appointed an Academic Planning Board. In July 1961 they selected the first Vice-Chancellor – Frank Thistlethwaite (1915-2000), a historian at Cambridge University. He was a specialist in American history and had worked at American universities. Thistlethwaite took up the post in



One of the most ambitious pre-New University expansion plans was at Leeds. For the designers of the New Universities, '... one recent development plan which was studied with great interest and which had considerable relevance ... was the carefully documented study for Leeds University by Chamberlin Powell & Bon, published in 1960' (Brawne, 1970). It argued for compactness and flexible, continuous teaching space – lessons learned at UEA.



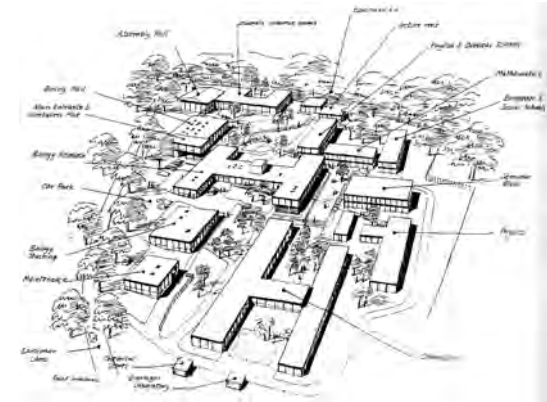
Frank Thistlethwaite's popular textbook on American history, *The Great Experiment* (1955) – an apt way of describing his own years at UEA.

October 1961 and held it until his retirement in 1980. His distinctive vision for the new university was to loosen traditional subject-area boundaries and move to more interactive teaching. Thus, disciplines were grouped into schools of study, and contact between schools was encouraged. Seminar teaching was promoted. The university was to be a single community in which networking would be maximised. These educational and social ideas fed directly into the physical plan of the university.

The pro-university mood of the 1960s was confirmed by the Robbins Report, which was published in October 1963. The New Universities had already been established, but Robbins gave an enormous boost. 'Its case for a large and rapid increase in higher education on demographic, economic and social grounds was undeniable. ... The public mood was one in which great numbers of things which in a normal period would take years to settle if they could be settled at all, could be decided for ill or good in almost no time. The press, the public, the political parties, were full of enthusiasm for higher education, especially university education. Money flowed in abundance. The few voices that were raised in opposition and restraint were shouted down and muffled' (Carswell, 1985). Universities moved from the UGC backwater in the Treasury to the political arena of the Department of Education and Science, where high-profile ministers staked their reputations on exciting policies for the university sector.

The positive signals to the new universities could not have been stronger. 'In Whitehall as elsewhere, there was a determination that the system should not be devalued as a result of expansion. Robbins was not to be done on the cheap. Building standards were generous, staffing ratios were maintained or even allowed to improve, postgraduate support was rapidly extended, and the growth of ancillary services was faster than the growth of student numbers' (Carswell, 1985).

At the embryonic University of East Anglia it was clear that permanent buildings on the new Earlham site could not be ready for some years. The University leased Earlham Hall (it is still leased by UEA), and a temporary 'University Village' was built on a nearby site between December 1962 and July 1963. The first 112 undergraduates arrived in October 1963.



The temporary University Village (1962-63), designed by David Luckhurst of Feilden & Mawson. It remained in use until the 1980s. The site is now occupied by new student housing which retains the name 'University Village'.

The visionary masterplan

Lasdun and Thistlethwaite

One of Frank Thistlethwaite's first tasks when he took up the post of Vice-Chancellor of the new University of East Anglia on 1 October 1961 was to make arrangements for the university's permanent buildings. In keeping with the spirit of the times, Thistlethwaite aimed high, seeking 'the best contemporary architecture of its time: distinguished buildings which would make a positive presence felt and provide a sense of place and an aesthetic experience for generations of students' (Thistlethwaite, 2000).

Thistlethwaite had a preference for commissioning a single architect both to draw up a masterplan and build the first wave of buildings, in order to assure a coherent and architecturally notable result. This ruled out the typical procedure where one architect would devise the masterplan and design some key buildings, with other approved firms executing individual buildings. Sir Leslie Martin had put forward this idea in June 1961, but Thistlethwaite looked elsewhere. His approach also excluded the involvement of local architectural practices.

Various names were canvassed, and on 10 October 1961 – a little over a week after taking up his new post – Frank Thistlethwaite went to see Denys Lasdun in his London office. There were two previous points of contact. Earlier in 1961 Lasdun had presented a design for student residences at St John's College, Cambridge, where Thistlethwaite had been a fellow and member of the building committee. Lasdun was not selected at St John's but he made a favourable impression on Thistlethwaite. In addition, the chairman of UEA's Academic Planning Board was from Leicester University, where Lasdun had just designed Stamford House, a student residence.

Denys Lasdun & Partners (DLP) had an international reputation for inspiring and exciting architecture. The practice was already working on major university projects around the country, and so were familiar with the challenges of creating prestigious architecture on tight budgets. He was exceptionally well qualified for the UEA commission.

There is another expression of English political strength which is detrimental to art: the democratic rule by committee and majority. Building today more than ever before is decided by committees. Committees can never be hoped to be the best of judges in matters aesthetic. To demand or merely to license a bold building requires a bold man.

Nikolaus Pevsner *The Englishness of English Art* (1957). Frank Thistlethwaite was UEA's 'bold man'.

The meeting between Thistlethwaite and Lasdun was a success. Lasdun was offered the commission in January 1962 and after administrative formalities his appointment was confirmed in March 1962. He said he should be left alone for a year to develop a masterplan for the new university.

Development Plan – Draft I and Draft II

In early 1962 UEA was still a very small organisation. Initial briefing for the new buildings took the form of informal discussions between Lasdun and Thistlethwaite on the nature and needs of the new university. They discussed the academic and social implications of centralised facilities as opposed to colleges, and the need to bring disciplines together; and agreed on a tight grouping of buildings to minimise distances and create an urban quality to the university. Otherwise Lasdun had a pretty free hand. He had to plan a university of 3,000 students to be built over ten years, with scope for further expansion to 6,000 students.

Over a period of months in the summer of 1962 the UEA project team in Lasdun's office drew and redrew the site with different ideas for the university masterplan. Their ideas were strongly influenced by the topography of the site, with the buildings being concentrated on the higher ground towards the north boundary. In the first design studies the central group of buildings was located towards the west of this built-up zone, looking down the steep hillside to the bend in the River Yare, with the remaining accommodation extending towards the east. Denys Lasdun himself saw the opportunity of moving the main focus to a central position, with eastward and westward patterns of growth divided by a 'harbour'. This was the generating idea which led to the masterplan.

Two important themes emerged in the formative studies. Firstly, the zigzagging residential blocks appeared at an early stage, forming a boundary between the open site and the teaching accommodation. Secondly, multi-level solutions with raised decks and walkways were a consistent feature throughout design development.

Draft I of the Development Plan was presented to the University in December 1962 and unveiled to the public on 25 April 1963 – Lasdun literally removed covering sheets from models and drawings one-by-one. His office first emphasised the acronym 'UEA', which later became ubiquitous. The Draft I design was greeted enthusiastically and received extensive comment and publication in international architectural journals. It is crucial for an



Lasdun's Development Plan Draft I got an enthusiastic response when it was presented in April 1963.

understanding of Lasdun's intentions at UEA, representing his underlying ideas before practicalities masked their purity. Some years later Lasdun set out the generating principles in the following words (Development Plan report, Denys Lasdun & Partners, 1969):

Concentration: The University must be compact, a place where activities merge and where the individual can sense his identity with the whole. All activities are within five minutes' walking distance and linked by continuous pedestrian routes.

Limitation of the spread: This together with the fact that there will be no 'cordon sanitaire' not only secures the continued enjoyment of a recreated landscape for the university and the people of Norwich, but also ensures its continuance as a cohesive whole.

Linkage and Movement: Elevated walkways, carrying services, run horizontally against the natural slope of the ground enabling buildings to be entered one or more floors above ground level, while roads follow the slope of the ground. This gives a degree of concentration otherwise obtainable only by a more extensive use of lifts; allows separation of pedestrians from vehicles; and encourages mixing and chance encounters.

Student Living: A form of living fully integrated with the University as a whole and capable of fostering small groups within the larger community.

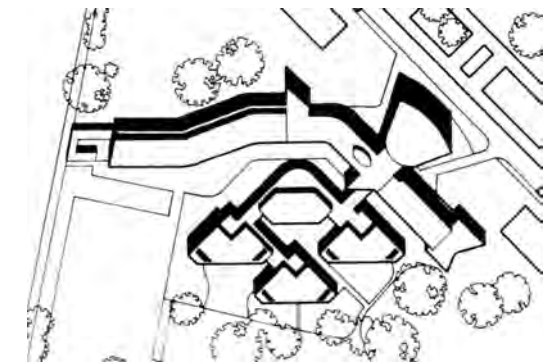
Materials: The infinite variety of colour in the valley landscape makes the choice of external materials and colour of particular importance. Of all the suitable materials available today concrete in its natural grey state appears to enhance the colours of the landscape to greatest advantage. It is important, therefore, that there should be a predominance of this material with its range of neutral colours depending on whether it is precast, in situ or in the form of concrete blocks.

Growth: The establishment of a nucleus in the first stage by systems of quick construction to produce a microcosm of the ultimate University. The plan must have the capacity to assimilate the changing needs of the academic programme and be susceptible to architectural modifications and elaborations by discovery and use.

Following the euphoric response to Draft I, there was a period of negotiation with the newly-appointed heads of academic departments about their precise needs. Almost all the changes to the masterplan were driven by academic considerations. The teaching accommodation for the



Lasdun's revised Development Plan Draft II of September 1963. In the Stage 1 building programme of 1965-74 about one-third of this plan was built.



Lasdun's Hallfield primary school in London of 1951 anticipated elements of the design language of UEA on a miniature scale.

arts and sciences, which had been separated, was recast as a long teaching wall. The library moved to its current freestanding position, with room for expansion, and all the commercial, social and catering functions were grouped into a single building. In contrast, the ziggurat residences were only slightly adjusted. Draft II incorporating these changes was made public at the end of September 1963, as the first students were arriving at the temporary University Village.

Building the vision

Draft II was finalised and approved over the following months. Site works started in 1964 and construction of the first buildings in Stage 1 of the campus started in January 1965.

The process of building was a struggle. The new universities were established in a wave of enthusiasm and had huge ambitions, which went far beyond the funds provided by the Treasury. DLP had to work hard to keep within the UGC cost limits, but was helped by the successful fundraising efforts of the Promotions Committee, which raised more than £1 million towards constructing the ziggerats. Nevertheless, many fittings were undesirably cheap so that funds could go into the structural elements. DLP argued that if more money could be found later it would be possible to upgrade fittings but not the structure. The interiors at UEA are utilitarian, simple and inexpensively finished. Lasdun's architectural excellence is shown in the massing of the buildings, the circulation routes and the interrelation of blocks.

An intensive building programme between 1965 and 1968 saw the completion of ten ziggurat blocks, phase 1 of the Library and parts of the Teaching Wall and walkway system, staff housing, squash courts, the Lecture Theatre block and the Computing Centre. The first three ziggurats and the Chemistry segment of the Teaching Wall were occupied in October 1966. The new buildings were used in parallel with the temporary University Village and Earlham Hall.

Lasdun had a difficult relationship with many influential figures at UEA from an early stage. The pressures from tight budgets and the challenge of architecturally adventurous buildings caused further strains. In 1968 DLP and the University agreed that it would be best to find another architectural practice to complete the first stage of the building programme.

Lasdun had been aware that the whole of UEA was unlikely to be built in accordance with Draft II. He therefore ensured that Stage 1 would be able to stand alone if the need arose. This



Construction in progress in 1965.



Norfolk Terrace in 1969 looking towards the Biology section of the Teaching Wall. Additional sections of the Teaching Wall and walkway were built in 1970-72.

realism gave Lasdun's work at UEA its architectural coherence, despite the fact that not even the whole of Stage 1 was completed to his designs. However, the non-completion of Lasdun's masterplan presents a continuing challenge and opportunity for his successors.

DLP produced Draft III of the Development Plan in 1969, taking account of changes in financial circumstances and alterations to the brief since Draft II. The text accompanying Draft III is the most substantial document produced by DLP on UEA. It explains the key themes of the earlier drafts, and gives Lasdun's views on how to safeguard the quality of UEA's architecture whilst satisfying the university's need for growth and change. Virtually nothing of Draft III plan was built in the way Lasdun proposed.

Evaluation of Lasdun's work at UEA

In the early 1960s the New Universities were highly desirable architectural commissions – 'the most prestigious building projects of the whole post-war era' (Saint, 1992). They were an expression of national purpose in the era of the Welfare State, equivalent to, say, a palace or cathedral for an earlier generation. The University of Sussex was the first of the New Universities to get under way; in 1959 Sir Basil Spence (of Coventry Cathedral fame) designed a masterplan of pavilions in a landscaped park. The 'headline' building was Falmer House (1960-62), the gateway to the University, which housed the social and communal facilities. Its lavish design horrified the University Grants Committee; it is now listed Grade I (the only building in the New Universities to have this grade). Later buildings at Sussex were much more economical.

Lasdun was not interested in designing tasteful pavilions in a landscaped park. He wanted to express the vitality and dynamism of university life in a correspondingly vital and dynamic form. It was less important to display good taste than to be radical and 'urban'. This meant a network of connected buildings, rather than pavilions. Over the summer of 1962 DLP's team re-thought the conventions of campus planning to produce the distinctive linear layout of teaching and residential buildings that gave UEA's Development Plan and the completed buildings such a powerful architectural character. It was a remarkable creation.

Needless to say, there were precedents for elements of the UEA masterplan – it was developed within an intellectual context where many of Lasdun's concerns and values were shared by others. But the synthesis at UEA is unique.



Falmer House, University of Sussex, by Sir Basil Spence. 'Officials [of the UGC] groaned about the proclivities of some universities to appoint prestigious and therefore, they suspected, expensive architects' (Carswell, 1985).

Two other New Universities aimed for the same dense urbanity as UEA – Lancaster and Essex. The masterplan for Lancaster was designed by Gabriel Epstein of Shephard & Epstein in 1963 and the first buildings date from 1965-68 – the same as UEA. Lancaster used a conventional layout type for the period, with buildings arranged informally around casual semi-courtyards. This leads to a rather labyrinthine and monotonous architectural character, although functionally sound. Architecturally, UEA is much bolder and more exciting.

The masterplan of University of Essex was designed by Kenneth Capon of Architects Co-partnership in 1962 and construction started in 1964, just ahead of UEA. Like Lasdun at UEA, Capon developed a completely new architectural language at Essex. Thus, Essex is the most similar of the New Universities to UEA. When comparing them, UEA has two strong advantages: first, both masterplans were abandoned long before completion, but Lasdun's work at UEA has a coherence which is lacking at Essex, where unfinished decks are still intrusive; and second, the character of the individual buildings is generally stronger at UEA than Essex, with the exception of the Essex library which is architecturally more impressive than UEA's.

UEA stands, therefore, as one of the architectural stars of the New Universities, and even in its incomplete form it is the most striking large scale architectural composition of the whole post-war Welfare State building programme. The view of Lasdun's UEA buildings from the Broad bears comparison with earlier architectural set pieces in Britain, like Blenheim Palace or Carlton House Terrace.

Despite limitless ambitions UEA was less than half built, and what was built was done on constrained budgets. Thus the close-up quality of the buildings is not as impressive as other more generously funded buildings of the period, like Arne Jacobsen's St Catherine's College, Oxford (1960-64, listed Grade I) or Lasdun's own Royal College of Physicians, London (1960-64, listed Grade I). Nevertheless, the main Lasdun blocks at UEA were meticulously detailed, particularly the precast concrete and window elements.

The overall conception and impact is the most important thing at UEA. It is sometimes pointed out that Lasdun published photos of UEA models long after work had started on site, but there is sense in this as the models communicate Lasdun's design so well. His approach at



Lancaster University adopted a compact, high-density masterplan, but the buildings and layouts were bland by comparison with UEA.



The architect of Essex University, Kenneth Capon, answered critics by saying, 'Wait until it's finished', but like the masterplans of all the New Universities it never was finished.

UEA could be called highly ‘schematic’: the big idea is dominant and the physical realisation of individual buildings is not the main point of interest.

Lasdun’s UEA: key themes

A number of important themes contribute towards an understanding of the architecture of Lasdun at UEA.

1. Urban quality

Lasdun was determined to produce a university which would be more like a city than a suburb. Thistlethwaite recalled agreeing that something of the density and concentration of an Italian hilltop town would be desirable, and the comparison appears repeatedly in his writing and Lasdun’s (Thistlethwaite, 2000). In the 1969 Development Plan report the theme of urban density and tight planning is emphasised: ‘The unbroken continuum of teaching and living spaces form an architecture of urban landscape rather than a collection of disparate campus buildings.’

2. Raised walkways

The raised walkways go back to the earliest design stages. Pedestrian separation from traffic was a favourite feature of post-war planning; at UEA as elsewhere the excitement of movement in three dimensions was at least as strong a motivation as practicality. The pedestrian route was not integrated into the linear teaching wall, but was built as a separate walkway alongside (but detached from) the face of the building. This creates an intermediary element which is neither building nor landscape. Lasdun emphasised that the sloping site meant the raised walkways connect to ground level at the entry point to the campus.

Elsewhere walkways of this period are often covered, but not UEA’s. One important component has been lost: the linking stair between the Norfolk Terrace ziggurats and the walkway outside Biology. At present the ziggurat walkway is a long dead-end.

The walkways provide many of the best views of UEA’s architecture, like those between the ziggurat roof-towers and along the narrow space between Norfolk Terrace and the Teaching Wall.



San Gimignano, the perfect Italian hill town.

The walkway network was not extended after the completion of Stage 1 of Lasdun's masterplan, apart from the slender and little-used high-level link to the Sainsbury Centre (more of a bridge than a walkway), although the new buildings to the north of the Teaching Wall have connecting bridges (covered) at walkway level.

3. Exposed concrete

Lasdun believed that concrete was the definitive material of the 20th century. He argued that it was especially appropriate for UEA's rural setting, but he used concrete in urban buildings too. He advised future architects to 'keep the number of materials used to a minimum. Building should be predominantly in concrete, with concrete blocks for load bearing walls'. Feilden & Mawson followed this advice in completing Stage 1 of the campus.

The dominant use of concrete is central to Lasdun's architectural values. In the 1990s he made the following notes on his career: 'Not at all ashamed to have employed concrete. ... Not a cosy little material ... but great potential when properly employed in the proper situation – and properly maintained. A serious material, not slick, not trendy. ... Can produce a sculptural form of great power; the building is what it is. ... Concrete makes manifest the true essence of form, space, structure and surface' (Lasdun Archive, RIBA Library). In his 1977 RIBA Royal Gold Medal speech Lasdun said that modernist buildings 'are not always pretty. Nor need they be pretty; architecture has other things to do besides consoling. It can feed our imaginative life [by creating] the sense of wonderment' (Lasdun, 1977).

Concrete is a versatile material. At UEA it is used in three ways: cast in situ for large structural elements; as smaller, more precise precast units where there is repetition; and as blockwork for smaller, non-repetitive elements or non-structural partitions.

The precast systems for structure and cladding, developed by DLP in collaboration with structural engineers Ove Arup & Partners, were particularly successful. The control of rainwater on the precast cladding of the Teaching Wall and Library, using secret drainage, has avoided ugly weathering.

Some blocks that were due to be extended were left with blank end walls: the west end of Norfolk Terrace and the east end of Suffolk Terrace, the west end of the Teaching Wall and the north end of the Arts spur, and some of the service cores on the north face of the Teaching Wall. These walls still remain in their relatively crude, 'unfinished' state.



A dramatic concrete world under the Teaching Wall walkway.

4. Landscape and the 'harbour'

The UGC required that the New Universities should have large sites, so they all ended up in suburban locations. Much of UEA's Earlham site had been a municipal golf course (UEA is required to keep its grounds open to the public). Lasdun wanted to retain the sense of semi-wild parkland and marsh as a setting and counterpoint for his compact group of buildings. His landscape vision was romantic, indeed with an element of fantasy – 'virtually an outcrop of stone on the side of a hill leading down to a river' (Lasdun, 1966). It is in the tradition of an eighteenth century landscaped park, which excludes the outside world – in this case the semi-detached housing of suburban Norwich which Lasdun, like most architects, found so utterly uninspiring.

For Lasdun the 'harbour' was a crucial design idea. This is the open area between Norfolk and Suffolk Terraces, bounded by the Library, Lecture Theatres and Computing Centre. In Lasdun's diagrams it is the point where flows of space converge – 'the key "monument" around which the whole organisation devolves', and a 'spatial transition from the open Norfolk landscape to the more intimate spaces of the University itself' (Development Plan report, 1969). The reality does not have the impact of Lasdun's evocative descriptions.

The key buildings

The three most impressive architectural elements of Lasdun's Stage 1 development were listed as buildings of special architectural or historic interest in 2003.

Ziggurats (listed Grade II*)

Two ranges of residential accommodation, Norfolk and Suffolk Terraces, soon came to be known as the 'ziggurats' due to their distinctive form. They were a fundamental part of Lasdun's scheme for UEA. The idea of a fringe of residences facing south over open landscape was fully developed in Lasdun's Development Plan Draft I of April 1963. The ziggurats were built in 1965-67.

Lasdun had worked on stepped-section student residences before he was appointed by UEA. His runner-up scheme for St John's College, Cambridge, of 1961 had a stepped section; and design studies for a stepped-section student residence at Christ's College, Cambridge, were begun in 1961, although construction did not start until 1966. There were precedents for stepped section buildings dating back to the early decades of the 20th Century and the idea was



View into the Harbour from the main walkway; Computing Centre on the left and Library in the background.



The south sides of ziggurats are the strongest architectural elements at UEA.

prevalent around 1960. The UEA residences were an extreme case of the stepped section, both in terms of the large-scale impact when seen from a distance, and the ingenious three-dimensional packing that was achieved.

Each ziggurat comprises of 5, 6 or 7 'habitats' of 12 rooms (10 single and 2 double), each with a kitchen, utility, showers, bathroom and toilets. The idea of student groupings of this size had been established in the earliest discussions between Thistlethwaite and Lasdun.

Each ziggurat is actually a 32m long segment of a linear block which is shaped like a saw-tooth in plan, all set out on a 9ft square grid. Only the top three levels are really pyramid-like: all the below-walkway levels have the same number of rooms. The ingenuity of planning and the visual impact are outstanding. The setback between levels allows very low ceiling heights in the corridors and service areas, reducing the overall height of the building; in addition, one or two levels are sunk into the ground, exploiting the sloping site. As a result the ziggurats have up to eight levels, whereas the newer student housing, Constable Terrace for example, has four levels. This, plus the saw-tooth plan, means that as many students are accommodated in a 32m ziggurat as in a 32m slice of Constable Terrace; but whereas half of the rooms in Constable Terrace face north, away from the landscape, all rooms in the ziggurats look out onto the landscape. The ziggurats are complicated buildings, but in terms of exploiting their location they are extremely efficient.

The north side of the ziggurats facing the rest of the university is quite different from the south side facing the Yare valley. There was undoubtedly an architectural fascination with expressing the contrast between front and back so strongly, and the rugged, cliff-like north side is impressive but challenging. Attempts have been made to 'soften' it with climbers, trees and planting boxes (Lasdun dismissed the last as 'suburban', a term of contempt). The area is degraded by the paraphernalia of dustbins, etc, but Lasdun himself said that the undercroft was to 'deal with all the backyard mess of undergraduate activities, games rooms, laundries, cars and bicycles' (Lasdun, 1965).

Lasdun's Development Plan showed over 50 ziggurats, but only ten were built. None of the later student residences at UEA were built with a stepped-section; nor did they take on the ziggurats' role as attention-grabbing architectural markers at the boundary between urban



The austere north side of Norfolk Terrace in 1969.



Norfolk Terrace in 2004 with barely controlled planting.

development and open landscape. Ten ziggurats out of fifty sounds unimpressive, but the reality is in fact magnificent: the panorama towards the ziggurats across the Broad is the key image of UEA.

Teaching Wall (listed Grade II)

The idea of a linear ‘spine’ for the university’s academic space emerged in Lasdun’s design studies during 1962. Development Plan Draft I had a branching layout, but the branches disappeared in Draft II. The Stage 1 Teaching Wall, as completed by Feilden & Mawson, is 460m long; Lasdun envisaged a longer wall, with a second parallel wall to the north, connected by linking blocks; the Arts spur is the only one of these linking blocks to be built.

The continuous building reflects the ideas of Thistlethwaite, who wanted to break down the divisions between disciplines. Lasdun said that it ‘eliminates boundaries between teaching faculties. The “wall” of teaching contains little and big rooms with backyard space. It ensures closeness of departments; economy of services; facilitates exchange of ideas and equipment and can cope with disciplines not yet born’ (Lasdun, 1965). In fact the wall consists of segments for different disciplines with limited internal connections between them. They are connected by the external access walkway, which is also the main service route.

On the south side the service cores and divisions between disciplines are hidden, resulting in a uniform and imposing elevation. The service cores project on the north side. The bold rooftop structures give drama that the building would otherwise lack.

When Lasdun ceased to be the university’s architect the teaching wall was incomplete, but it was continued by Feilden & Mawson who added Arts II at the east end and Mathematics & Physics and Environment between Lasdun’s Chemistry and Biology segments. The west end is unfinished and has a spiral escape stair, as is the north end of the Arts spur: spiral stairs at UEA signify temporary end walls where further building was anticipated.

The length, height and imposing character of the Teaching Wall mean that it is, and will always remain, the architectural backbone of the UEA campus.

Library (listed Grade II)

The Library was constructed in two phases, 1965-67 (west part) and 1971-74 (east part). A blank temporary wall closed off the first phase, but most photographs taken at this time were framed to avoid showing it.



The seemingly never-ending south elevation of the Teaching Wall.



The north elevation of the Teaching Wall is punctuated by the service cores.

Phase 2 was carried out after Denys Lasdun had ceased to be the University's architect, but to ensure continuity he was appointed as design architect in collaboration with Feilden & Mawson as executive architects. As with the Teaching Wall, Feilden & Mawson were outstandingly successful in achieving integration between the earlier and later phases.

In Development Plan Draft I the Library was tightly integrated with the other central buildings, but in discussion with the newly-appointed librarian, Dr Guttsman, it was moved in Draft II to the present more detached location to allow room for expansion. Lasdun anticipated expansion to the east, ultimately doubling the size of the Library.

The librarian's clear ideas were a major influence on design development. He wanted open access with books and readers on the same floors – no large reading room, as at Lasdun's library for the School of Oriental and African Studies in the University of London. At UEA, Lasdun suggested a large stair rising through the building, and an arrangement with readers and books on alternating half-levels, but these architectural features were rejected in favour of simple, open floors. As a result the interiors work well but lack the architectural excitement of, for example, the library at the University of Essex.

The Library's architectural character derives from the precast concrete exterior. Unlike the Teaching Wall, the lines of vertical support are visible. There are no vertical supports at the corners, giving a seamless continuity between adjoining elevations. The floor slab immediately above the walkway level is recessed, giving a double-storey scale; otherwise the wall system is applied uniformly to the whole of the building. Lasdun was happy to repeat architectural elements many, many times, but he usually provided some large-scale articulation to prevent crushing monotony, like the cranks in the Teaching Wall.

The precast concrete wall system is exceptionally well-proportioned and well-detailed. It is visually more successful than Lasdun's later precast work at the School of Oriental and African Studies (SOAS), University of London.

Although the Library was sited to permit growth, proposals for expansion have proved controversial. A proposal to expand to the east was approved and the first phase, designed by Shephard Epstein Hunter, was built in 2004-05.



UEA's Library is a free-standing building with a deeply-modelled elevation of precast concrete panels.



The library at Essex University, by Architects Co-partnership.

Sir Denys Lasdun

In the early 1960s Denys Lasdun (1914-2001) was among Britain's most highly respected and internationally admired architects. His buildings and projects were published in modernist architectural journals all over the world, and he won many of the best commissions in Britain.

Denys Lasdun & Partners was very firmly under the leadership of Lasdun himself. His design ideals permeated the office, and he examined all major design decisions. He made unusually extensive use of models, not only the beautiful presentation models which appear in so many photographs but also rougher working models which were built and rejected until satisfactory three-dimensional solutions had been achieved.

Lasdun trained at the Architectural Association in London in the early 1930s. The writings and buildings of Le Corbusier had immense impact on the younger generation, and Lasdun was captivated by reading *Towards a New Architecture* and especially by seeing the master's works in Paris. In 1972 Lasdun said that Le Corbusier 'was and still is the dominant figure in my architectural thinking' (Boyarsky & Maxwell, 1972). Le Corbusier's influence at UEA is clear in the use of exposed concrete, strongly articulated plan forms, and the bold roof features on the Teaching Wall.

Throughout his career Lasdun was at the centre of the architectural community in London, but he was an independent architect who avoided groups and categories. The radical dissimilarity between his designs and other buildings with the same function is much more striking than any similarities: UEA is unlike the other New Universities, and the National Theatre (designed 1964-9) differs from other theatres. Given Lasdun's love of Le Corbusier's Pavillon Suisse, it is remarkable how little any of his own buildings resemble it. Lasdun seldom repeated architectural ideas, thinking out each project from scratch. He was fluent in writing and speaking, sometimes with oracular obscurity, and could inspire and guide client committees.

Chronologically, UEA came at the height of Lasdun's most productive period, which began with the Claredale Street cluster block in the mid-1950s and culminated in his designs for the National Theatre in the late 1960s. He was knighted in 1976 after the opening of the National Theatre, and his status in the architectural profession was shown by the award of the RIBA Royal Gold Medal in 1977. A retrospective exhibition was held at the Royal Academy in 1997.



Sir Denys Lasdun and the office modelmaker Philip Wood with a model of the SOAS Library.



Denys Lasdun saw Le Corbusier's Pavillon Suisse in Paris only a few years after it was built in 1930-31, and it remained an iconic work throughout his life.

Lasdun was a serious and sincere modernist, probably the greatest British architect in the generation of followers of Le Corbusier. He did not adjust to the anti-modernist or post-modernist mood of the 1970s and '80s. Major commissions no longer came his way and his practice was scaled down and eventually disappeared. He was always hyper-sensitive to criticism (Lasdun, 2003), and in old age was protective of the buildings he had successfully brought to fruition.

Lasdun's exceptional achievements are best exemplified by three remarkable buildings: the Royal College of Physicians, the National Theatre, and the University of East Anglia. UEA is his largest completed project, even in its reduced form. It has been well preserved, and its size allows the visitor to experience Lasdun's work at the urban scale to which he attached so much importance, rather than the scale of the individual building. What it lacks in the quality of its finishes and fittings relative to the two higher-budget masterpieces is compensated for by the size and setting. The University of East Anglia is in the first rank of Lasdun's work.

Completion of first generation campus

When Denys Lasdun and UEA parted company in 1968 the university turned to the Norwich-based architectural practice of Feilden & Mawson. Over the next five years they oversaw the effective completion of Stage 1 of Lasdun's Development Plan, with various adjustments. Bernard Feilden always expressed great admiration for Lasdun's work and his practice's completion of the Teaching Wall and Library continued Lasdun's design with exceptional care. There are differences between the Lasdun and Feilden & Mawson segments of the Teaching Wall, but these are suppressed on the most prominent south façade.

Feilden & Mawson departed more radically from the Development Plan in the central area, where Lasdun's ideas proved over-optimistic and unaffordable. The Union House, restaurant building, Chaplaincy, shopping street, Congregation Hall (the former sports hall), Council House, Registry and the Music Centre were all new designs by Feilden & Mawson and other architects, mostly from Norwich and East Anglia. Continuity with the Lasdun buildings is helped by the consistent use of concrete.

The buildings from this period are not as memorable as Lasdun's, but they are subsidiary and do not detract from the architectural impact of Lasdun's work. They were essential for making the new campus at UEA a complete and viable university.

The brevity of human life and the scale of the work ensures that scarcely any building is completed by the same man that begins it. The architects that follow strive to make some alteration, and as a result something begun well by one man is finished incorrectly. I feel that the original intentions of the author must be upheld.

Alberti, *Ten Books on Architecture* (C15). Feilden & Mawson followed Alberti's principle admirably in completing the Teaching Wall and Library.

The completion of Stage 1 in the 1970s was set against a national mood which was completely different from the buoyancy and optimism of the early 1960s. The post-Robbins Report euphoria lasted a very short time: the first ominous signs came as early as 1965 when the Treasury ‘deferred’ the start of capital projects (Carswell, 1985). By the late 1960s the hugely ambitious plans for the New Universities had slipped out of reach. Instead of symbolising optimism, universities became famous for student unrest. As Britain was plunged into economic free-fall by the global Oil Crisis of 1974, and unemployment and inflation rose to frightening levels, the prospects for growth in the university sector were non-existent. ‘All over the system desperate measures were being taken independently to match prospective commitments with resources. Almost every university imposed a ban on filling any vacancy which might luckily occur, however much a replacement was needed. Maintenance of buildings was postponed. Economy committees were set up to cut out frills and increase efficiency’ (Carswell, 1985). The New Universities, including UEA, were left in a particularly difficult position, with abandoned masterplans and very modest student numbers.

In this period of depression UEA had the exceptional good fortune to attract the contribution of Sir Robert and Lady Sainsbury.

Critical reactions

‘...possibly the only successful large-scale post-war industrialised pre-cast reinforced concrete building complex yet built – the University of East Anglia ...’

A & P Smithson *Without Rhetoric* (1973)

‘...Denys Lasdun’s visually impressive and obviously megastructural UEA.’

Reyner Banham *Megastructure* (1976)

‘In the University of East Anglia, Lasdun fulfilled his ambition to lose the individual building within a “city” created on a previously blank site. The building and the master plan become virtually as one with the long street backing onto the ziggurat-like residential blocks. The section is the key to understanding the design, the plan and elevation being a form of extrusion.’

Alan Powers in Emanuel (ed) *Contemporary Architects* (1993)

What the architect has to do is to express the significant image. He lives in the twentieth century, his buildings must communicate the significant side of the age in which he lives.

Most architects are now almost completely conditioned to think that the clear exhibition of structure on the outside and inside of a building is a moral imperative.

Every individual building will, in the course of its creation, produce its own laws and it is these before anything else that the architect must understand and accept.

The architect must always try to present something more universal than a private view or mood.

Technical developments ... cannot affect the central truth that the coherence of a work of architecture depends on its detail being a complete expression of and completely integrated in its basic architectural purpose.

A building is a whole thing, it has to be thought right through; control of siting, control of materials, control of volumes, elevational organisation are all part of a single process.

Denys Lasdun, extracts from ‘Thoughts in Progress’, published in *Architectural Design* (Lasdun, 1956-57)

The Sainsbury Centre

The Sainsbury gift

Sir Robert and Lady Sainsbury began collecting works of art in the early 1930s and gradually built up an outstanding and diverse collection which they displayed in their home, as a background to everyday life. By the 1960s they had started thinking about the collection's ultimate fate.

Meanwhile, UEA's Vice-Chancellor Frank Thistlethwaite wanted to encourage creative arts in the new university. A School of Fine Arts and Music was established, but the initial efforts to set up an art gallery were unsuccessful. A number of factors brought the Sainsburys into contact with Thistlethwaite: they were admirers of Lasdun's architecture; their daughter studied at UEA as an undergraduate; and they met socially through shared interest in the visual arts. In 1968 the possibility of the Sainsburys helping with the development of visual arts at UEA was discussed in general terms.

In 1973 the Sainsbury collection was exhibited in Holland, and the success of this exhibition stimulated the Sainsburys to make permanent arrangements for their collection. They approached Thistlethwaite with the proposal that they should give the collection to UEA together with funds to build a permanent home for it. The University responded enthusiastically.

The new building was to house both the collection and the University's School of Fine Arts (now the School of World Art and Museology). The Sainsburys wanted the collection to be experienced as part of the everyday life of the University, as it was in their own home, and not segregated in a museum. After discussions about the apportionment of costs between the Sainsburys and the University Grants Committee (who contributed to the academic accommodation), there was a public announcement about the remarkable gift in November 1973. It was a time of high inflation, so there was urgency to start building. The Sainsburys wanted to involve Kho Liang Ie, the designer of the exhibition in Holland, and he suggested collaboration with Norman Foster as architect. This was agreed and Foster was appointed in

April 1974. However, Le died within a few months and Foster took over the role of exhibition designer.

The brief was developed and a site on the campus selected. The design was finalised by the summer of 1975. Not everyone approved: Bernard Feilden, who had been consultant architect to UEA since Lasdun's departure in 1968, resigned in protest. Construction began in early 1976 and the new Sainsbury Centre for the Visual Arts (SCVA) opened in April 1978. It caused a sensation.

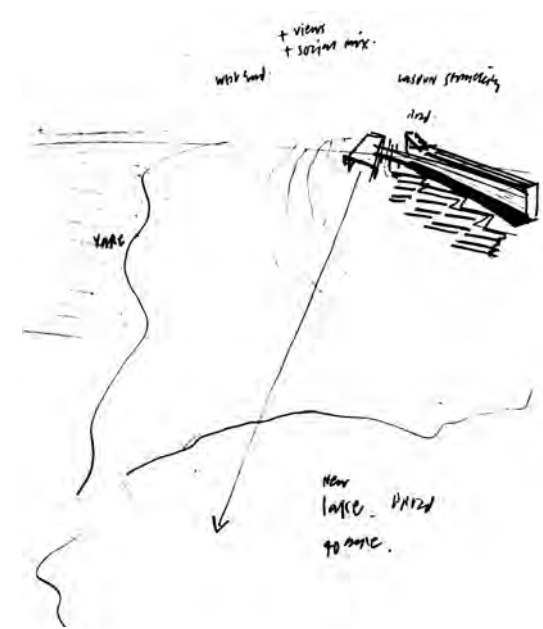
In 1988 the Sainsburys provided funds for additional accommodation. Although the original building would have been easy to extend, the Sainsburys wished to leave it unchanged and build a separate structure. The new Crescent Wing was added below ground level, immediately to the south-east of the SCVA, and opened in 1991. The roof of the Crescent Wing forms a grassed terrace in front of the SCVA. Because the land is falling toward the Broad, a line of glazing appears above ground level.

The cladding of the original Sainsbury Centre was replaced in 1988. In 2004 a major refurbishment of the SCVA was begun, including the construction of a more direct underground link between the original building and the Crescent Wing.

Evaluation of Sainsbury Centre and Crescent Wing

Lasdun and Foster are both from the modernist tradition which holds that the primary generator of a building's design is its function. This applied to both the design's practicality and also its architectural expression. Lasdun and Foster used this principle in different ways. Lasdun's interpretation of users' needs and aspirations led to complex, highly-wrought forms, at UEA and his other buildings. Foster seeks a single, pure form which encompasses the whole range of user needs in a single proposition. Whereas Lasdun was excited by the complexity and diversity of the city, Foster strives for perfect buildings.

The Sainsbury Centre is one of Foster's early masterpieces. The single-storey, flat-roof 'shed' was the architectural theme which first brought him to prominence, with the Reliance Controls factory of 1966 (carried out when Foster was a member of the practice Team 4) and the IBM Cosham offices of 1970-71. The Sainsbury Centre is the ultimate refinement of the 'shed', where the building's geometry is no more than an absolutely plain box, and infinite care and effort goes into materials and detailing. Although the large-scale geometry is simple, the



Norman Foster's diagram showing the Sainsbury Centre's relationship to the Broad and the 'Lasdun geometries'.

Sainsbury Centre makes a powerful impact both externally and internally. The large, immaculate, precise object looks exquisite when placed in an idyllic landscape, like a Greek temple on a Mediterranean hillside. The scale and sweep of the undivided interior are breathtaking.

Foster's bold strategy of integrating a variety of activities in a single enclosure has produced some practical problems. The layout of accommodation for the School of World Art and Museology seems to have been determined more by the architectural concept than the users' preferences. The fully-glazed south-east façade is incompatible with the low daylight levels required for works of art, so the glazing is almost always screened by blinds, cutting off the view to the Broad.

As was the intention, the Crescent Wing has little impact on the Sainsbury Centre, which is still seen as a freestanding object in the landscape. The Crescent Wing's rooftop grass terrace does, however, cut off the view of the Broad from the interior of the Sainsbury Centre.

The Sainsbury Centre is one of the most important British buildings of the 1970s. The Crescent Wing is less prominent and less significant, even though it is designed and built to the highest standards.

Norman Foster

Norman Foster (b. 1935) is the leading British architect of the present day. Amongst many honours he was awarded the RIBA Royal Gold Medal in 1983, knighted in 1990, appointed to the Order of Merit in 1997, and created Lord Foster of Thames Bank in 1999. His practice, Foster & Partners, is large and internationally successful.

Foster sprang to prominence as a young and promising architect very soon after setting up his own practice in 1967. The Sainsbury Centre, completed in 1978, and the slightly earlier Willis Faber & Dumas office building, Ipswich (1971-75, listed Grade I), established decisively that Foster had reached the highest level of architectural practice. He designed the Hongkong & Shanghai Bank headquarters, Hong Kong (1979-86), and Stansted Airport (1981-91) shortly after UEA, followed by a succession of major projects all round the world. His work gradually moved away from the geometrical austerity of the Sainsbury Centre, which is a milestone in the career of Britain's most important living architect.



The Sainsbury Centre after the 1988 re-cladding.



The sweeping interior of the Sainsbury Centre.

Later campus developments

From the 1970s to the present

The Sainsbury Centre was built in a period which was characterised by deep gloom in British universities. In the economic depression of the 1970s the public support on which universities still relied for practically all their income and capital funding was severely curtailed. In the early 1980s the Thatcher government planned for a reduction in student numbers and contraction of the university sector. With recovering economic growth at the end of the 1980s it became possible to plan for expansion for the first time since the heady days of the 1960s. Since then UEA has been almost continually expanding and adding to its building stock. The building programme, from the Sainsbury Centre onwards, has almost all relied on non-UGC funding.

After Bernard Feilden resigned as consultant architect to UEA in 1975, Norman Foster took over this role. In 1982 he recommended Rick Mather as architect for the University's new building projects. His first design was for a new Education building which was completed in 1984. This was funded by the sale of Keswick Hall, the home of a teacher training college that merged with UEA. Mather also designed new buildings for the Climatic Research Unit and Systems (both funded by the Wolfson Foundation and completed in 1985). Systems formed the third side of a courtyard with Education.

Mather was then asked by UEA to prepare a 20-year development plan and appointed as consultant architect from 1988 to 1994. One decision made almost by default was that Lasdun's Development Plan, with the Teaching Wall and ziggurats, would not be continued: buildings of such a scale, character and cost were impossible. Raised walkways were abandoned: new buildings and circulation would be on the ground. Responding to the new pattern of incremental development on the campus, Mather noted that, 'The problem with this diversity is how to control it to achieve a coherent and satisfactory final result when built over a long period of time. Requirements for the buildings' plan, massing or height are impractical because almost nothing is known about what will be required. A traditional device for this is the urban street in which the building wall defines and controls the exterior space of the street' (Mather,



The tiled skin of Mather's first building at UEA – Education, completed in 1984.

1989). Mather planned Chancellor's Drive as the generator of the new urban form in the area to the north of the Teaching Wall. Mather suggested that it should continue across the river Yare and form a new access route into the campus, but this was not possible. It seems likely that a similar strategy for organising new buildings would have been proposed for the north-east part of the site.

A new building programme started in 1989. The sale of the University Village site financed new student residences, Constable Terrace and Nelson Court, and also a new Drama Studio to replace a small theatre in the University Village. These buildings were all designed by Mather and completed in 1994. At the same time the Department of Health financed a new building for occupational therapy and physiotherapy. This was the Queen's Building, designed by John Miller & Partners and completed in 1993. The Elizabeth Fry Building, also designed by John Miller & Partners, was completed in 1995. All these developments followed the principles set out in Mather's Development Plan.

The SportsPark was the outcome of a joint venture between the local authorities and UEA to establish a regional sports centre. Most of the funding was from the Sports Council. It is located just outside the UEA site boundary on local authority land, but managed by UEA. It was designed by RH Partnership and completed in 2000.

The pace of development on the campus is continuing. In the last few years new academic buildings have been added: phase 1 of the School of Medicine, Health Policy and Practice (designed by RMJM, completed 2003), the Zuckermann Institute for Connective Environmental Research (ZICER – designed by RMJM, completed 2003), the circular Biophysical Chemistry building (RH Partnership, completed 2002), and an extension to School of Biological Sciences (designed by RH Partnership, completion 2005). An extension to the Library is under construction (designed by Shephard Epstein Hunter, completion 2005). The East Development Plan by LSI architects, which responds to the underlying geometry of Lasdun's Development Plan, is being implemented; Colman House by LSI was completed in 2004 and the construction of further residences and the Health & Community Centre, also by LSI, started in 2005.

The new buildings have introduced innovative design for energy efficiency, which has become a feature of all the recent buildings at UEA.



The west elevation of the Queen's Building (left) and the north elevation of Constable Terrace.

Meanwhile, university buildings are constantly being modified and adapted for changing academic needs. The original buildings, which are nearly 40 years old, are in need of major refurbishment.

Evaluation of recent buildings

Rick Mather faced a situation which was radically different from the open site and limitless ambitions that led to Lasdun's Development Plan. Mather was adding to an existing development, but there had been other changes since the 1960s. He was from a younger generation than Lasdun and no longer believed in utopian projects or the modernist myth that designs are generated by functions. Without this form-generating myth, Mather, like many architects at this period, went back to pure architectural forms – squares, cubes, circles, cylinders – and at the same time corrupted the forms to express the arbitrariness of real life: 'the simultaneous need for the ideal and for its contamination by programme and context', as a study of Mather put it (Pearman, 1992). This was the post-modern world view which is reflected in the UEA buildings, which were Mather's first large, new-build projects.

The site was the unloved semi-wasteland to the north of the Teaching Wall, cut off from the Yare valley and Norfolk landscape; and where the new, smaller buildings would be dwarfed by the six-storey Teaching Wall. Mather placed the Education and Systems building as a neat branching extension to the Teaching Wall, connected to one of the service towers, somewhat like branching forms of Lasdun's Development Plan Draft I. However, the visual character of the new buildings was overtly decorative, in contrast to the Teaching Wall, perhaps compensating for the difference in scale. To maximise wall height, Mather used a 'butterfly' profile roof, sloping down from a raised perimeter to a central gutter; and to increase the apparent height, the cladding of glazed blockwork was laid vertically. In contrast to the Teaching Wall, the surface is patterned and the windows are expressed as framed openings cut through the wall. The windows themselves are blue.

The circular Climatic Research Unit was intended to act as a landmark for the new northern area of the campus. It used the same architectural language as the Education and Systems buildings. The style is highly characteristic of the 1980s, and in the case of CRU the 'date stamping' is stronger because Mario Botta, an Italian architect whose work was widely published at the time, often designed round buildings with patterned surfaces and cut-away segments (Pizzi, 1998).



A design by Mario Botta showing the characteristic patterned surface and cut-away circular forms which he used in many projects from about 1980.



Mather's Climatic Research Centre and Chancellor's Drive.

In the more recent buildings the architectural language has changed. Both Mather's Constable Terrace and the John Miller & Partners' Queen's Building of the early 1990s have smooth white rendered walls above ground level, and a darker tiled ground floor. The windows are black. This more austere style, by comparison with Education/Systems and Climatic Research, has been used for all the later buildings in this part of the campus, with variations between the individual buildings. This has created an orderly and pleasant environment, without the single-mindedness of Lasdun's earlier architectural statements.

The new development in the north-east part of the campus is still in progress. The character of the buildings has become more relaxed, with greater use of colour and variety in materials, form and massing. This was prefigured in aspects of Mather's work, for example the handling of the corners at Nelson Court, and is also seen in the SportsPark. Thus there is a transition from a grand and serious architectural manner at the core of the campus to greater informality in the areas of new development.

Landscape

Lasdun's landscape intentions

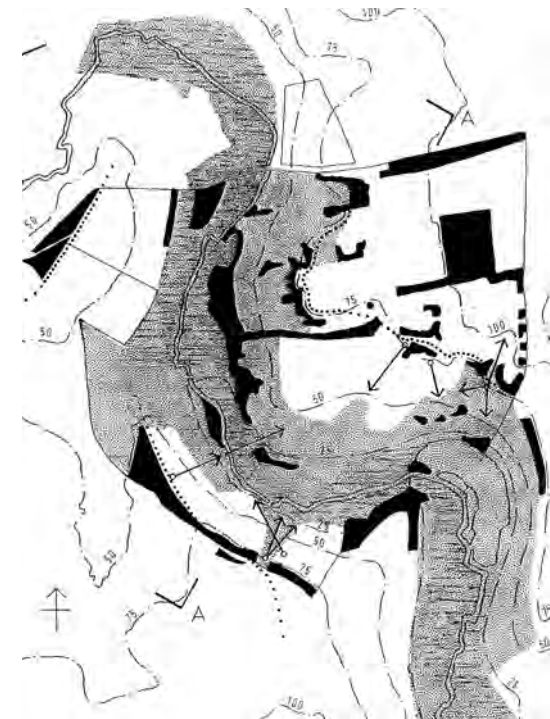
The site at Earlham was generously made available to the proposed new university by Norwich City Council in the autumn of 1959, and this was a factor in the UGC's decision to support the university in April 1960. The City Council had acquired the site in 1925; a golf course was laid out in the 1930s as an unemployment relief project. The university use was examined by a planning inquiry which reported positively in May 1961. The City Council required that the university grounds should remain open to the public.

The former golf course site provided 165 acres (67ha) to the north and east of the River Yare, sloping gently down to the river. The University bought a further 107 acres (43ha) to the south and west of the Yare, making a 272 acre (110 ha) site. A site of this scale was required by UGC for new universities to allow space for future expansion (their target was 200 acres, or 81ha). The University has since acquired a further 100 acres (40ha) in the Yare valley.

It was an extremely attractive site. Denys Lasdun first visited it in January 1962 and found 'an organism: water, marsh, slope trees, meadow, parkland – set in an East Anglian landscape' (Lasdun, 1965). He wanted to retain its character. This objective was complementary to the desire for a compact group of buildings.

Some early design studies experimented with buildings on the south and west of the Yare, but the principle of grouping all the university buildings on the higher ground towards the north of the site was established at an early stage, with open landscape along the river valley. This principle is embodied in Lasdun's Development Plans, where the academic buildings are bounded by a fringe of residential ziggurats looking out to the landscape – 'disposed on the site with loving respect for the configuration and contour of the landscape, its prospect and aspect' (Lasdun, 1965).

About 50 acres (20ha), or 20% of the site area, was to be used for building.



The site before development. The black areas are existing trees, and the toned area is the open valley floor.

Colvin's landscape plan

Denys Lasdun & Partners prepared an 'Interim Landscape Report' in 1965, and in 1966 the eminent landscape architect Brenda Colvin (1897-1981) was asked to develop detailed proposals. She was one of the founders of the Institute of Landscape Architects in 1929 and President in 1951-53. She had been responsible for many urban landscape and large-scale reclamation projects, as well as garden designs.

Lasdun's vision had clear parallels with an eighteenth century landscaped park, like those designed by Capability Brown, where an architectural centrepiece is set in a seemingly natural and limitless landscape. Boundaries and signs of the outside world are hidden, and the landscape configured to create a variety of eventful and picturesque views, in which water frequently plays a crucial role. Colvin's Interim Landscape Report of 1967 described in practical terms how this vision could be achieved.

Colvin was cautionary but positive about building a new university on the attractive Yare valley site: '...Introducing massive architectural elements and a vastly increased community creates a new landscape. While it is hoped to preserve much of the character of the existing valley scenery, the requirements for access, circulation and traffic flow, recreation ... involve overwhelming changes which if accepted, foreseen and correctly planned in advance will enrich the landscape.'

To absorb change and maintain the landscape character, Colvin proposed the following key points:

- existing housing/buildings overlooking the site should be screened
- space between buildings requires carefully detailed hard landscape
- the grassy slope between the buildings and river to be dotted with tree and shrub groups, but avoiding colour in flowers
- climbing shrubs on wall surfaces and ground cover on banks.

She argued that 'The tendency towards suburban character ... should be resisted, the broad park-like landscape should be emphasised throughout.'

Colvin and her associate Hal Moggeridge carried out many landscape studies, from an analysis of the overall landscape setting beyond UEA's boundaries, to details for footpaths and supports

for climbing plants on the buildings. They contributed to the revised Development Plan of Feilden & Mawson (1971). At that stage they commented that ‘... the problem now is of unforeseeable types of growth ... within which many different units will be developed. Therefore the landscape has become important as a structuring element.’

However, Colvin and Moggeridge were disappointed by the meagre investment in landscape and their exclusion from key strategic considerations. They resigned in 1972.

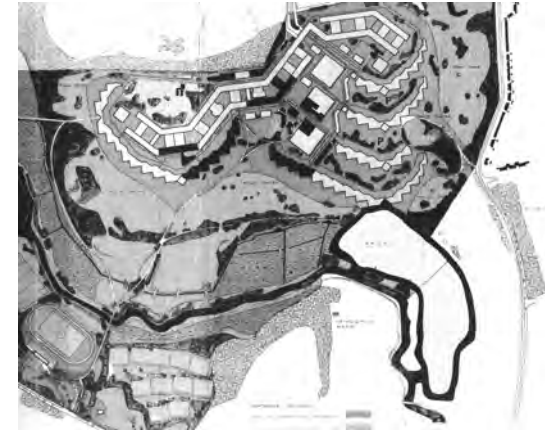
Only Stage 1 of Lasdun’s Development Plan was built, with buildings occupying about 24 acres (10ha) – about half of his envisaged scale of development. Even in this reduced form, the primary landscape objective was achieved: a compact and dramatic mass of buildings on the hillside above the Yare, apparently set in open countryside. This remains the great virtue of UEA’s landscape.

Most of the credit derives from the site that UEA inherited. Little has been done to strengthen the landscape vision. Colvin was aware of this danger, pointing out that, ‘The English landscape is very largely a man-made work of art ... that depends on constant care. ... We accept the privileges, too often with little thought of the related responsibilities to the future. ... I feel that any landowner, more especially a University has the responsibilities of ensuring for the future, the benefits inherited from the past’ (letter to Thistlethwaite, 4 November 1968).

The Broad

Lasdun’s overall objective was to preserve the existing landscape character, but he wanted to modify it in one dramatic way: he saw the easternmost line of ziggurats touching and rising gradually away from a body of water. Buildings next to water have a tremendous appeal, for example along the Backs in Cambridge (where Lasdun had hoped to build for St John’s College) and at York University. The conjunction of buildings and water would have provided a visual closure to the eastern end of the Yare valley landscape, at the fringe of Norwich’s suburban development. The idea was incorporated in Colvin’s landscape proposals.

However, UEA could not afford to excavate an artificial expanse of water for purely landscape reasons. Instead, the present Broad was created through a gravel extraction contract. Rosamunde Reich was the landscape architect involved in the Broad project. It was dug between 1973 and 1978.



Brenda Colvin’s site plan of 1967 with a proposal for an artificial lake in a location to the east of the Broad that was excavated in 1973-78



The view across the Broad to Suffolk Terrace and the Library. Colman House is visible on the right.

The practicalities and costs of gravel extraction led to a Broad in a different location from that shown on Colvin's drawings. It is placed centrally and separates the university buildings from the Yare. The open landscape is focused on a central area between the Broad and the ziggurats, and lacks the dynamic sense of space following the curve of the river Yare that had been envisaged by Lasdun and Colvin. At present the central expanse of grass to the south of the ziggurats feels poorly defined and unrelated to the Broad. Two contributory factors are the water level of the Broad – it is a good metre below the grass slope – and the planting along the water's edge forming a screen. Unless one is raised above the general level of the slope the extent of the Broad is hidden: the result is visual disconnection of the lake from the landscape and buildings. One of Colvin's sketches shows how the bank by the Broad should have been more gradual.

There has never been an effective landscape response to the Broad and on-going construction work at UEA. Lasdun's vision of a parkland landscape in the Yare valley is still valid, but, as Colvin pointed out, the vision can only be sustained by creative intervention in the landscape.

The Sainsbury Centre and UEA landscape

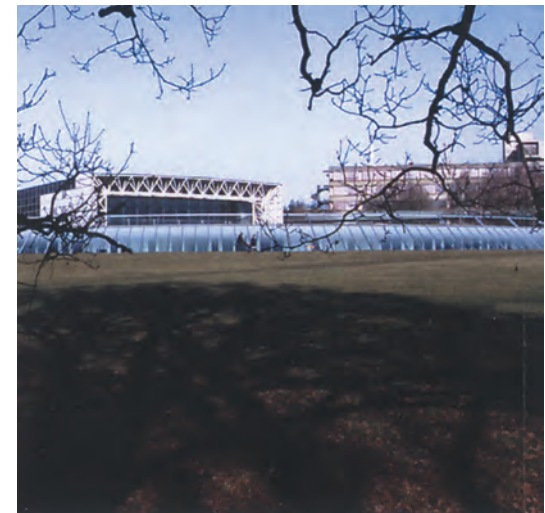
The Sainsbury Centre of 1974-78 was placed just to the west of Lasdun's buildings. It follows the alignment that Lasdun had proposed for the westernmost row of eight ziggurats, although it encroaches slightly deeper into the landscape than the intended front edge of the ziggurats. The new building is therefore consistent with Lasdun's strategy for site usage, although it is more conspicuous in the view from the Broad. Regarding the relationship between buildings and site, Lasdun had envisaged the ziggurats looking out to the south-west over the Yare valley, whereas the Sainsbury Centre's south-west elevation is practically blank and the view in this direction is not exploited.

The Sainsbury Centre's glass end wall is strongly orientated back towards the central space beside the Broad, reinforcing the visual containment of the landscape. The land between the south-west of the Sainsbury Centre and the Yare has been marginalised, rather than contributing to the Lasdun/Colvin landscape vision.

The well-known landscape architect Lanning Roper (1912-83) was consultant for the Sainsbury Centre. It seems his main contribution was setting the ground contours at the glazed end of the building, facing the Broad. This was changed when the Crescent Wing was added.



The south-west elevation of the Sainsbury Centre.



The Crescent cuts off Foster's earlier Sainsbury Centre from the meadow that runs down to the Broad.

The glazed arc of the Crescent Wing is barely visible from above, but when viewed from below it cuts off the Sainsbury Centre from the slope which runs down to the Broad.

Mather's Development Plan

Rick Mather's proposals of the 1980s were concerned with areas north of the Teaching Wall and in the north-east part of the site, away from the Yare valley. He planned Chancellor's Drive as the generator of the new urban form to the north of the Teaching Wall. A guiding principle was that buildings should be laid out to create designed exterior spaces and circulation routes between buildings, rather than leftover spaces.

The landscape context is very different from the open slopes of the Yare valley. Mather did not involve a landscape architect in the development of the master plan; input has been limited to individual sites.

Mather's principles have been put into effect in the area to the south of Chancellor's Drive, where seven new buildings have been built by four different architectural practices over more than twenty years. Development to the north of Chancellor's Drive is on-going, with views of woodland being retained between the new buildings. Considerable care has been devoted to the landscape, which is episodic and lacking a single theme or vision: this is in the spirit of Mather's incremental approach to the masterplan. The new, informal pattern of development to the north of the Teaching Wall co-exists with Lasdun's bolder vision which is dominant to the south of the Teaching Wall.

Mather's proposals for the north-east part of the Campus were less fully developed, although he envisaged extensive development in this area. He designed Nelson Court, which was built on land which had been levelled for sports pitches to the east of the old sports hall (now Congregation Hall). A continuation to the east was proposed, which has now been accomplished with Colman House, somewhat different from Nelson Court and the original intent.

Mather made landscape changes to improve the entrance to the campus, but this is still an awkward and confusing area. Lasdun's Development Plan did not provide a major gesture at the point of arrival.



In the areas developed following Mather's Development Plan there is landscaping and planting between buildings (ZICER on right, Education ahead).

Current landscape developments

New development is in progress in the north-eastern part of the Campus. The design principles set out in the East Development Master Plan (LSI, 2003) include the following points about landscape:

- thickening and extending the tree planting to Bluebell Road on the east boundary of the Campus
- informal courtyards between residential blocks
- tree planting in clumps within courtyards using species characteristic of the Campus
- enclosing the car park with a strong landscape outline
- retaining planting along Cow Drive on the present north boundary of the Campus
- structural tree planting to screen the south elevations of new residential blocks for solar shading
- strengthening the geometry of the Lasdun masterplan with tree planting along routes from the periphery of the campus to the centre.



The geometrical framework for the East Campus Development (coloured purple), now in progress.

The River Yare and beyond

Some early design studies showed buildings on the south and west of the River Yare, but these almost all disappeared before Development Plan Draft I. The only building that remained (other than sports pavilions) was a proposed Vice-Chancellor's lodge off Colney Lane, and this was never built.

The Development Plan showed most of the land on the far side of the Yare being used for sports fields, including a running track and tennis courts, with terracing and extensive new planting. In fact, only just over half the land has been used for sports fields. The remainder is managed by the University as a visual amenity, recreation area and ecological resource.

There is an attractive walk along the River Yare itself, which is popular with the local community as well as members of UEA. This is a visually enclosed environment, particularly in the summer, from which the University buildings are barely visible despite their close proximity, except across the Broad.



The River Yare, an enclosed rural world in the summer.

New developments to the south of the University site are visible on the skyline, particularly the buildings of the John Innes Institute as well as the new Norwich and Norfolk Hospital. Colvin had proposed ‘large plantations along the skylines’, to ‘mark the division between country and city’ and protect the romantic vision of an open, natural landscape.

The ecology of the UEA estate has been praised (Gibson, 1987, 1989, 1995). It includes a wide variety of habitats in a relatively small area; the built up part of the site contributes least to the ecology of the campus. Ecological conservation is an established principal in the management of the estate. ‘I would contend that ... the biological diversity is still very high, and something to be cherished. The contrast with some other universities of the same generation is marked: York, Essex, Sussex and Lancaster are little more than collections of buildings amidst close-mown lawns and “lollipop” trees. UEA is indeed fortunate in having such a valuable biological and visual resource on its own doorstep’ (Gibson, 1987). There does not appear to have been a recent study of the current ecology.



The terraced playing fields seen from the River Yare.

SECTION 2

ISSUES

This section reviews the ways in which pressures for change at UEA could lead to loss of significance in the buildings and landscape. The potential vulnerabilities are presented as a series of questions. Opportunities for enhancing significance are also identified.

1. Adaptation of significant modern buildings

Will the need for functional change to UEA's buildings lead to loss of significance?

As well as being expressive architectural statements, the buildings at UEA were designed to meet functional needs. Over time, functional shortcomings have arisen, and the buildings consequently need alteration or refurbishment. It is important to understand how much change of what kind can be accommodated whilst retaining significance.

Experience of change at other Lasdun buildings is relevant. His most important buildings date from the 1950s to the mid-1970s, so they are between 30 to 50 years old. Most buildings of that age need substantial refurbishment.

1. *Royal College of Physicians* (1960-64, listed Grade I)

Lasdun argued that the brick-clad parts of this building were expected to change, whereas the mosaic-clad parts were more permanent, showing that he anticipated change in the building. The Grade I listing now means that changes to the main rooms and public areas are extremely closely monitored by English Heritage (as they were by Denys Lasdun in his lifetime), but changes to hidden services are acceptable, as are internal changes in the service areas of the building. Denys Lasdun designed an extension to the College in the 1990s, but did not slavishly follow his own architectural language of the 1960s. The College now has much greater intensity of use than in the 1960s, but with adaptations in service areas the building continues to work well, while its main architectural ideas remain just as powerful. It has successfully absorbed change in secondary areas without loss of significance.

2. *Christ's College, Cambridge* (1966-70, unlisted)

Lasdun's student residences at Christ's College have strong similarities with the UEA ziggurats. There were problems with the building fabric (leaks, draughts, and maintenance problems) and health and safety problems with unprotected drops. In 2002-03 a major renovation was carried out, focusing mainly on the external envelope. In situ concrete has been painted, precast concrete cleaned and lacquered, windows replaced, draught doors added at entrances, grassed areas on raised terraces replaced with paving, and balustrading added. The work has been carried out very carefully, and the building almost looks new again; but it looks like an imitation Lasdun building, not a real one. This is an important lesson – do not over-restore. Part of a building's significance derives from its linkage to the era when it was built. Original fabric, even



Lasdun argued that, over time, the brick-clad parts of the Royal College of Physicians building would change more than the mosaic-clad parts.



Lasdun's stepped student residences at Christ's College, Cambridge, have been almost too thoroughly refurbished.

if it is worn, can be preferable to new replacements, so long as functional considerations permit. At Christ's College functional problems have been overcome at the cost of some loss of significance. (Note: This discussion only relates to the south facing terraces. An inappropriate addition has been built on the north side of the building.)

3. *Bethnal Green cluster block, London (1952-55, listed Grade II*)*

This block of flats was so dilapidated that the local authority owners proposed demolition in the mid-1990s. It was bought by a developer who restored the structure and turned the building into flats for sale to private owners. The ground floor layout was changed to increase security. The overall configuration, which was the cluster block's main architectural idea and the origin of its architectural significance, has been preserved, despite drastic changes internally and at ground level. These changes must be worth accepting if the functional problems were so severe that the alternative was demolition.

In these cases the important characteristics of Lasdun's designs have survived refurbishment, even though secondary features have changed.

In Section 1 it was pointed out that Lasdun's buildings at UEA are highly 'schematic': the overall impact is the most important thing, rather than small-scale details. Retention of the large-scale impact is therefore the most important conservation objective. However, incongruous features should be avoided, even at the small scale, as they weaken the buildings' character and impact.

The Foster buildings are also architecturally significant, although they are not yet listed. In contrast to Lasdun's work, in the Foster buildings small-scale design, materials and details make a greater contribution to significance. A more restrictive policy regarding changes is therefore appropriate. Incongruous features could be extremely damaging. The current refurbishment is being carried out by Foster & Partners, which ensures respect for the original design intentions. Because the Foster buildings use many specialised, purpose-made components, management and maintenance may in the long term present increasing problems for the sourcing of replacement parts.

It is evident that the significant buildings at UEA can absorb some degree of change to meet changing functional requirements, but all changes must be carefully considered to avoid detracting from the buildings' essential architectural character.



The Bethnal Green cluster block has changed ownership and undergone changes, but it survives as part of the urban landscape.

2. The setting of significant buildings

Will changes to the setting of important buildings lead to loss of significance?

When considering changes to the setting of important buildings at UEA, the main concern is with visual impact – changes which block or impair important views would detract from significance. The key issue is the impact of adding new buildings in proximity to the significant Lasdun buildings.

In similar situations Lasdun himself argued that buildings in different styles can co-exist successfully – he was usually trying to justify his modern designs in traditional settings. This was how he put it: ‘What I think is important about preservation is linked absolutely with the nature of cities. ... It is important to see old and new together; this gives vitality. You could almost say that it is a vitality which nurtures tradition. The old buildings take on a new dimension when they are contrasted with new buildings; and this is what life is about and therefore what art is about and therefore what architecture is about’ (Lasdun, 1966).

Lasdun applied these principles at the Royal College of Physicians. It is sited between classical terraces of the nineteenth century, but it does not imitate them. However, Lasdun claimed that he responded to the site: ‘Here it is important to understand the sense of place, what the place is about’ – the building form: ‘It [the site] is a backwater, so the building is arranged inward-looking, to make a sort of court’ – and the materials: ‘Superficially, the materials match and rhyme. Blue brickwork is used because there are blue slate roofs on Nash’s buildings; and mosaic is used because it roughly matches the stucco’ (Lasdun, 1966). The combination of the modern College building next to traditional neighbours has been a great success. It is worth noting that the College building is smaller than its neighbours.

Lasdun’s proposal for new laboratories in Cambridge was rejected, unjustifiably in his opinion. He designed tower blocks that were higher than the historic college buildings. ‘I am not against preserving the old, where there are sound reasons for doing so; but the reasons must be more positive than just fearing what may take its place’ (Lasdun, 1966). At UEA, ‘preserving the old’ means preserving Lasdun’s buildings. Following his own statements and designs, there should be no objection in principle to adding new buildings of a different character next to his. Would it be safe to follow Lasdun’s precepts?



The Royal College of Physicians sits alongside early nineteenth century terraces facing Regent’s Park.

A precedent exists at Fitzwilliam College, Cambridge. It was designed by Lasdun in 1960 but, as at UEA, his masterplan was not completed. Buildings have been added by MacCormac Jamieson & Prichard, Van Heyningen & Haward, and Allies and Morrison. These designers seem to have done successfully what Lasdun did at the Royal College of Physicians – responded to the sense of place and chosen ‘rhyming’ but not identical materials and details. The result is respectful but not imitative, and provides the accommodation needed by a successful college.

There has already been a great deal of post-Lasdun development at UEA. An early review noted that ‘Another significant quality of his [Lasdun’s] design is that its basic nature – use of levels, pattern of growth, etc – is so positive that the project can be modified and elaborated without damage, and other architects, as is likely to happen here, can be called in to contribute to it as new requirements become apparent’ (*Architectural Review*, 1969). The most architecturally significant addition is the Sainsbury Centre for Visual Arts, and this too seems to be consistent with Lasdun’s precepts: it is geometrically related to the neighbouring Lasdun buildings without repeating them, and its hard, monochrome materials and details have an affinity with Lasdun’s concrete buildings. It also meets another important criterion: it is an outstanding work of architecture in its own right.

The recently-completed Library extension at UEA respects the form and massing of Lasdun’s design, with a different vocabulary of materials. It has been well received.

It seems clear that appropriate forms of development in the setting of significant buildings at UEA can be successful, but this does not mean that any development is appropriate in any location. To protect significance, new development should not block or impair significant views, and new designs should respond to the particular context and be excellent in their own terms.

3. University expansion

Will the expansion of the University lead to loss of significance?

Lasdun’s Development Plan Draft III envisaged a university of 6,000 full-time undergraduate students within a built-up area of about 20ha (50 acres) on a site of 110ha (272 acres). In 2004 UEA has 12,500 students (part-time, full-time and postgraduate). The built up part of the site



Lasdun’s proposed new laboratories in Cambridge, in the form of towers which would have been prominent in views of the historic city.

is now about 16ha (40 acres) and will increase to about 18.5 ha (46 acres) with the East Development Plan which is in progress – a much larger student population on a smaller built-up area. This is consistent with Thistlethwaite and Lasdun’s vision of a compact, urban campus – the ‘10 minute university’.

Further expansion is expected at UEA. The possibility of adding land from the neighbouring Blackdale School site to the north east is being explored, but it is also important to consider the potential for more intensive use of the existing campus: recall that the UGC required 200-acre sites for the New Universities of the 1960s precisely to provide space for expansion. Is there a risk that new development on the existing campus would detract from the significance of the buildings and landscape?

The new development along Chancellor’s Drive shows that substantial amounts of new floorspace can be provided in closely-spaced, well-designed buildings in formerly undeveloped ‘residual’ parts of the campus without detracting from the significance of earlier buildings. A successful new environment has been created along Chancellor’s Drive.

Some areas that Mather’s Development Plan of 1989 identified as having development potential are still available. Based on the experience of Chancellor’s Drive it is likely that these areas could be developed without detracting from significance.

Some earlier buildings are of poor quality and/or obsolete for their original functions; they detract from the architectural significance of the campus. These are the Computing Centre, Congregation Hall (old sports hall), Careers Centre (old squash courts), services buildings in the boiler house area, and Lodge. The Lecture Theatre block makes poor use of a crucial site, in architectural and landscape terms. Waveney Terrace is being demolished. Redevelopment of these sites with new, high quality buildings which are appropriate for their locations could provide valuable facilities and enhance the significance of UEA. Any proposals for replacing these buildings would have to be developed with full consideration of the impact on the significance of adjacent buildings and the Campus as a whole, and would involve consultation through the planning process.

The continuing increase in university size and campus population may overload some facilities in the central area near the Square. It was crucial to Thistlethwaite and Lasdun’s concept that there should be a central focus of activity on the campus, and to maintain this principle there is already pressure to expand the central facilities. The buildings in this area have little

architectural significance, although the external spaces are successful. Appropriate change to the buildings in the central area should help to maintain a fundamental planning principle of UEA without loss of architectural significance.

One part of the UEA site that Lasdun proposed to develop is still undeveloped. This is the meadow to the south-east of Suffolk Terrace, Suffolk Walk and the Music Centre. Lasdun's Development Plan Draft II of 1963 (see p.7) proposed well-spaced tiers of ziggurats in this area, which were never built. They were also part of Colvin's landscape plan (see p.28).

Lasdun's Development Plan also showed unbuilt ziggurats to the west of Norfolk Terrace; this western site was successfully developed with Foster's Sainsbury Centre for the Visual Arts in the 1970s. Despite this precedent to the west, the eastern site was not identified for building in Rick Mather Architects' Development Plan of 1989.

Without the intended eastern extension of Suffolk Terrace the developments in the north-eastern part of the campus are visible from the Yare: Waveney Terrace (1969-72, demolished 2004-05), Nelson Court (1991-93), Colman House (2003-04), and new buildings under construction. This piecemeal view of distant buildings conflicts with Lasdun and Colvin's fundamental landscape principle, which envisaged a sharp contrast between a compact group of buildings and the open Yare landscape. The boundary between buildings and open space was to be formed by a sinuous line of ziggurats, seen in all versions of the Development Plan. The line of ziggurats began at the new lake towards the east of the site and, following the curve of the River Yare, gradually rose towards the north-west. Only part of this boundary was built, and there is now no question of adding more ziggurats.

The crucial consideration is therefore the potential impact of development to the east of Suffolk Terrace on the architectural and landscape significance of the campus.

An appropriate form of new development in place of the unbuilt eastern ziggurats offers the prospect of enhancing significance, by recovering Lasdun and Colvin's landscape vision. The Sainsbury Centre demonstrates that the original vision of expressive buildings looking onto open landscape can be reinterpreted successfully in new ways. It would be essential to ensure that new development avoids detracting from the Lasdun buildings that are now listed.

The question of development to the east of Suffolk Terrace must be viewed in the context of a new landscape vision for the campus as a whole. There has been no overall landscape plan since Colvin's departure more than thirty years ago; and although the original vision of Lasdun and



The 'temporary' blockwork barrier across the Suffolk Terrace walkway, which in Lasdun's Development Plan would have continued to the Broad.

Colvin is still valid, it is overdue for reinterpretation. The question of development to the east of Suffolk Terrace should be addressed in this reinterpretation.

Overall, there appear to be opportunities for expansion on UEA's main campus which could, if responsibly exploited in the framework of a well thought out masterplan, provide additional accommodation without detracting from significance.

4. Changing needs of the University

Will the changing needs of the University lead to loss of significance?

UEA has to adapt to numerous changes that have occurred since the Stage 1 buildings were planned in the 1960s.

Changing academic needs

The current research focus in top-level universities makes new demands on the quantity and type of accommodation needed. For example, working areas for research students have been created by adapting spaces in the Teaching Wall that were designed for other uses.

There are now many more students per member of teaching staff, so the seminar groups of 10-20 students anticipated by Thistlethwaite have been replaced by teaching groups at least twice as big, making the original seminar room provision obsolete.

The Teaching Wall provides a large quantity of general-purpose space, and by adapting the layout and services it can remain useful for many academic purposes. It may not be suitable for all university uses, like advanced scientific research, but there are many other activities that can continue to make productive use of the Teaching Wall. Because it was designed with the precise intention of providing versatile and adaptable academic space, internal changes in use and layout should not detract from the significance of the building, so long as the changes are carried out with respect for its architectural character.

Advances in scientific research and health and safety standards mean that over time the Teaching Wall may become less appropriate for laboratory use. The new Biology extension provides research space of a standard that cannot be achieved within the Teaching Wall.



The Teaching Wall is constantly being refitted for changing academic needs. The column-free spaces can be used in many different ways. This space has a ceiling formed by Lasdun's unpainted precast floor slabs, and his purpose-made lights.

New academic buildings can be added without detracting from significance, as shown by developments along Chancellor's Drive.

Changing consumer culture

Britain is much wealthier than it was in the 1960s and people's expectations have also risen. Students are consumers: to attract students and meet their expectations (and the expectations of their parents) UEA has added or is adding new facilities that were not expected in Lasdun's Development Plan, for example new food outlets, the Health and Community Centre with a children's nursery, an Islamic Centre, and study-bedrooms with en suite bathrooms. There is a continuing need to upgrade the provision of non-academic facilities, for example in the shopping street. Some non-academic facilities have disappeared, such as the senior common room. These may be replaced together with an alumni centre.

The changes to meet these expectations might cause a potential threat to significance. However, apart from the ziggurat residences, these non-academic facilities tend not to be located in the listed buildings or those of greatest architectural significance. This mitigates the risk of detracting from significance, so long as changes and new buildings respect the character and significance of the campus as a whole.

The evolution of both academic and non-academic activities at UEA is the major reason for change to the existing buildings. There would be a serious threat to the long-term viability of the significant buildings if they proved incapable of adapting to meet changing needs, but this does not seem to be the case. So far the buildings have proved capable of adapting without substantial loss of significance. With effective conservation management procedures, it seems probable that further adaptation to meet changing needs can be accommodated without loss of significance.

5. Ageing of building stock

Will remedial measures to retain the integrity of the building fabric lead to loss of significance?

The first buildings on the UEA campus are nearly 40 years old and are inevitably in need of repair and maintenance. A period of austerity in the 1970s and '80s, when cost-saving dominated university activities including building maintenance, may have hastened the onset of problems, but the impact is probably marginal.

The entire building stock on the campus has been assessed using the Royal Institute of Chartered Surveyors grading system, and the University plans to repeat this on a regular basis to provide reliable, updated information for maintenance planning. This allows the prioritisation of maintenance and upgrading, but maintenance is a perpetual requirement. The challenges that are presently faced by the buildings of the 1960s and '70s will soon be faced by the buildings of the 1980s and '90s. The Sainsbury Centre (1974-78) is now being refurbished and the first Mather buildings are already twenty years old. The long-term planning of repair and maintenance must take account of the ageing of all of the University's building stock.

The main problem affecting the fabric of the 1960s buildings is concrete deterioration due to the rusting of steel reinforcement. It is most severely affecting insitu concrete, especially the highly exposed service towers on the Teaching Wall. Precast concrete, used for most of the cladding, is less badly affected. UEA has initiated research reports, surveys, and diagnostic investigations. The worst affected area, the Biology tower, has been repaired. The concrete repair programme is on-going. The objective is to make repairs that restore the concrete to a technically sound state, in a way that is unobtrusive, and without visual change to the architectural elements. This is the ideal way of repairing the fabric whilst maintaining significance.

There are design features at UEA that have proved inadequate - for example, the use of asbestos - and in these cases it is not appropriate to reinstate the original specification. New specifications should aim to avoid or minimise any loss of significance.

Major renewal will be needed in the near future for almost all servicing systems, including the main, campus-wide distribution network. The insertion of new services can be intrusive and



Precast concrete panels on a ziggurat block showing their age.

risks detracting from significance, both internally and externally. This applies, for example, to the renewal of rooftop extract ductwork on the science sections of the Teaching Wall

On a smaller scale, individual items of repair and maintenance to finishes and secondary elements make relatively little impact. But they do contribute to the perception of a building, and if carried out inappropriately they detract from significance. It is therefore important to take care over details. In general, where original finishes and secondary elements in significant buildings can be retained or repaired, this is preferable to replacement. Where this is not possible, the essential characteristics of the originals should be retained in new work. Irreversible changes in significant buildings should be undertaken with the greatest caution.

Like-for-like replacement of components may become increasingly difficult as proprietary products go out of production. However, the Lasdun buildings used standard catalogue items of the day, and when replacements are needed it should normally be satisfactory to choose items from current catalogues with appropriate selection criteria. The selected items should be used consistently. Only in very exceptional situations would it be appropriate to have replicas specially made. This issue may become more critical for the Foster buildings.

One important difference between UEA's old and new buildings is their energy consumption and environmental performance: the newer buildings are very energy-efficient but the older buildings fall far below today's standards. Every opportunity should be taken during repair, maintenance and refurbishment work to improve the energy performance of the old buildings in ways that avoid or minimise detracting from significance, by upgrading insulation, using more energy-efficient servicing systems, and improving controls. Where proposed measures to improve environmental performance would involve change to the original fabric of significance elements, for example with new glazing or lighting systems, a compromise must be found to reconcile the important objectives of environmental sustainability and architectural conservation. This may involve some loss of environmental gain compared to the most energy efficiency solution, and greater change to the original fabric compared to retention without change. It is worth noting that greater efficiency will make it more affordable for UEA to keep its older buildings in productive use.

There will be a continuing challenge to overcome problems of obsolescence of the fabric and services in the significant buildings at UEA whilst minimising any loss of significance.

6. Listing

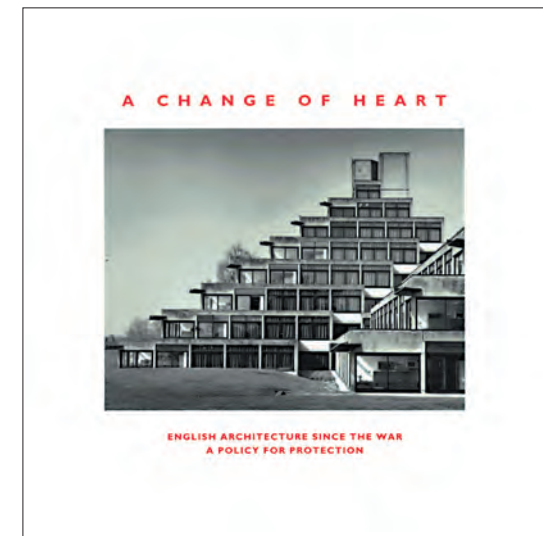
Will the listing of buildings at UEA lead to loss of significance?

Ever since they were built, Lasdun's site planning and buildings at UEA have been acknowledged as exceptionally interesting examples of post-war British architecture. When the principle of listing post-war buildings was introduced in the 1980s, UEA became a candidate for listing. However, buildings are not usually listed until they are 30 years old (unless there is an imminent threat of damage, which was not the case at UEA), so the first buildings at UEA became eligible for listing in the late 1990s. The last of Lasdun's designs, Phase 2 of the Library and the Teaching Wall, were 30 years old in 2004. Foster's Sainsbury Centre will be 30 years old in 2008.

In the autumn of 2003 the ziggurats were listed Grade II* and the Teaching Wall, Library and associated walkways were listed Grade II. Other Lasdun buildings, and the Stage I buildings by other architects, were not listed, being judged as having lesser architectural importance. As a consequence of listing, the University has to apply for listed building consent for alteration and refurbishment work, which may be refused by the local planning authority.

Listing should reduce the risk of inappropriate alterations that would detract from the significance of the listed buildings. However, before the buildings were listed, the University had acknowledged the importance of its architectural heritage and taken this into consideration when carrying out alterations or refurbishment. Thus, listing is likely to require relatively modest changes in the way that UEA manages and maintains its buildings.

The University will wish to continue funding the appropriate upkeep of UEA's listed buildings so long as they have a productive role in the University. This follows the principle noted in PPG 15, *Planning and the Historic Environment*: 'Economic prosperity can secure the ... continued use and maintenance of historic buildings, provided that there is a sufficiently realistic and imaginative approach to their alteration and change, to reflect the needs of a rapidly changing world' (§1.4). A conflict between planning policy and the continued productive use of the building could potentially create a threat to significance. Experience of constructive collaboration between UEA, English Heritage and the local planning authority since the listing in 2003 indicates that there is no such threat at the present time. One of the



A photo of the UEA ziggurats was chosen for the cover of the 1992 publication by the Royal Commission on Historic Monuments in England/English Heritage on post-war listing (Saint, 1992). This was more than ten years before the buildings were listed.

primary objectives of this Conservation Development Strategy is to ensure that it does not arise in the future.

The current procedures for listed building consent are cumbersome for listed buildings where multiple applications are required for repetitive work. This is one motive for the current English Heritage review of procedures for managing listed buildings. There is support in principle for 'management agreements' which will eliminate the need for multiple applications for listed building consent: UEA is precisely the type of site for which the new approach should offer advantages. New procedures may be introduced through legislation in about 2007.

7. Landscape management

Will the evolution of UEA's landscape lead to loss of significance?

The landscape that was envisioned by Lasdun and planned in Brenda Colvin's proposals relied heavily on stewardship of the existing place, with a management regime that allowed the buildings to be incorporated without major change to the existing character and ecology. UEA prides itself on its strong relationship with nature conservation. Whilst elements such as the Broad and the surviving reed beds alongside the Yare make good habitats they have not been managed in a way that achieves the aesthetics conceived by Lasdun and Colvin.

The UEA landscape is at risk in the following ways:

The Vision Since Colvin left in 1972 there has not been a single, coherent document or plan which sets out the landscape vision and practical ways of implementing it. Such a document would record the original design intent and how that changed/developed over time. It would be periodically updated to reflect current needs of the university but there should be a legible landscape structure that sets the context for siting and development of new or replacement buildings.

Landscape Management The landscape needs to be recognised as a designed man-made landscape, albeit with naturalistic elements. The various types of landscape and their planting should be managed appropriately to maintain the character for which they are considered special.

Loss of coherence of outdoor space and planting Colvin proposed simple bold elements to make up the landscape picture – sweeps of grass, masses of trees, broad reed beds and the uniqueness of the East Anglian sky. She recommended that little groups of flowery shrubs or herbaceous plants should not be used as they would be too bitty. In fact this is what has happened and much of the current planting is very bitty and not set within a wider context.

The retention of UEA's landscape quality relies on a vision, as well as continuing maintenance and management, including a programme of felling and replacement if necessary of perimeter plantings. Regular landscape maintenance is currently carried out to a high standard by UEA staff and outside contractors, but there is no overall vision which integrates consideration of topography, buildings and planting, in the context of on-going change in UEA and Norwich. Without such a vision there is a risk of progressive degradation of the inherited landscape, and the loss of landscape opportunities.

The landscape is not static: if nothing is done it will degenerate. The challenge is to accept the need for change and ensure that it is change for the better.

8. Health and safety, accessibility and other new regulations

Will the requirements of new legislation lead to loss of significance?

New regulations have led to numerous large and small changes to the site and buildings at UEA, and will lead to further changes, for example:

- rooftop extractor ducts
- accessibility - an upgrade programme is in hand
- security concerns and impact of 24-hour use
- potential conflict between Building Regulations (eg. Part L insulation) and listing

- Health & Safety and unprotected parapets, which has had an impact on the ziggurats
- CO₂ emissions quota: pressure for year-on-year reductions.

In some cases such changes can result in an impact on significance.

When change is considered as a result of these pressures, the same concern for avoiding or minimising any loss of significance is required as for change due to other reasons. In most situations there are alternative ways of complying with regulations, and the impact on significance should be taken into account when deciding which to adopt, especially for conspicuous changes affecting significant buildings or settings.

9. Esteem

Will low esteem for the architectural heritage at UEA lead to loss of significance?

Buildings are well looked after when they are esteemed, as is shown by the care lavished on most pre-C20 buildings. However, the early buildings at UEA, like many other concrete buildings of the 1960s and '70s, became deeply unfashionable and unloved in the decades following their completion. In due course it seems inevitable that UEA's remarkable buildings of the 1960s will be esteemed, but has the day yet arrived?

A survey of attitudes to the campus and buildings was carried out as part of the research for this Conservation Development Strategy. All members of the University community were invited to participate by responding to a simple questionnaire. The key findings are as follows:

- the open space on the campus is highly appreciated
- there is general support for looking after UEA's 'architectural heritage'
- a majority of people are not convinced that 1960s buildings are a great asset
- the newest buildings on the campus are more popular than the 1980s buildings and much more popular than the 1960s buildings
- most people believe that the 1960s buildings work reasonably well.

When the survey responses by students, academics and staff are separated, it is found that:



Lasdun's UEA has always been the most visually striking of the new universities. The ziggurats were given pride of place on the cover of the *Architectural Review's* special issue on the new universities in April 1970.

- students are the most positive group about the importance of UEA's 'architectural heritage', and are evenly divided about whether the 1960s buildings are a great asset, whereas academics and especially the staff are predominantly negative about the 1960s buildings
- students are somewhat less negative about the ziggyrats than academics, whilst university staff are the most negative group – however, even students indicated more negative than positive responses
- students, academics and staff have similar opinions about the Teaching Wall – they are negative about appearance and somewhat positive about functionality.

When the survey responses are broken down by time spent at UEA, it is found that:

- people who have been at UEA for more than ten years are more negative about the University's 'architectural heritage', but more positive about the functionality of the Teaching Wall
- people who have been at UEA for less than one year are slightly more positive about the University's 'architectural heritage' and the 1960s buildings.

It is clear that UEA's buildings of the 1960s have not yet achieved the esteem that people feel towards well-loved old buildings, although the finding that students and newcomers are more positive (or less negative) may indicate the beginning of a rising trend of esteem. Meanwhile it is highly desirable for efforts to be made to educate University opinion about its architectural heritage.

It is entirely possible that the newer buildings that are now very popular will experience a period of unpopularity as they get older and less fashionable; however, this is speculative and not a survey finding.

There is always a risk that functional refurbishment can lead to loss of architectural integrity. Given the current level of esteem for the 1960s buildings within the University community, proposals for refurbishment to overcome perceived shortcomings would probably be much better received than historic conservation of these buildings.

This risk of damaging refurbishment is mitigated because the Lasdun buildings are appreciated by a significant minority of people in the University, and because the most important buildings are now listed.

It is desirable that functional refurbishment and historic conservation should be seen as complementary and not conflicting objectives. This is one of the main reasons why UEA commissioned this Conservation Development Strategy.

10. Design quality

Will the design quality of new development at UEA lead to loss of significance?

This Conservation Development Strategy states Principles and Policies for the development and management of the UEA estate whilst retaining or enhancing significance; but all guidelines require interpretation on a case-by-case basis. A successful outcome at UEA is crucially dependent on the people who apply the Strategy on the ground.

To ensure a coherent and consistent architectural outcome, the founders of UEA appointed a single designer for the University's masterplan and buildings. Denys Lasdun did indeed create a stunning group of buildings, which is now the core of an expanding campus, but the idea of a single designer controlling everything is now out of the question.

After Lasdun's departure, the University appointed a Consultant Architect. The post was held by Bernard Feilden, Norman Foster and Rick Mather, all well-respected architects who could bring both high standards and a degree of detachment to the job of guiding and monitoring development on the campus.

In 1997 the University appointed an in-house Estate Development Director, a post that is currently held by an architect. It is essential for the successful implementation of the Conservation Development Strategy that the University maintains the role of 'design quality monitor', through a Consultant Architect or an in-house architectural appointment.

11. UEA's Corporate Plan

Will the dynamics of UEA's Corporate Plan lead to loss of significance?

The implementation of this Conservation Development Strategy will require the expenditure of resources by UEA, and this expenditure must form part of the University's over-arching Corporate Plan. The Corporate Plan has a five year life span with a biennial review. It represents a balance between many competing demands for priority and resources. As in every publicly-funded institution affordability is a key issue for UEA, and accordingly, the practical implementation of this Strategy will be achieved within affordability constraints imposed by the Corporate Plan. As funds are made available, UEA will carry out maintenance, refurbishment, renewal, development and master planning in line with the Conservation Development Strategy.

It is intended that the Conservation Development Strategy will have a five year life before review and renewal. Thus, whilst some matters will be addressed during the life of a prevailing Conservation Development Strategy, others may remain aspirational. Nevertheless, it will be possible to incorporate them into future revisions of the Conservation Development Strategy for later implementation.

The dynamics of UEA's Corporate Plan will therefore affect the rate at which the Strategy is implemented, but should not detract from UEA's commitment to the Strategy.

SECTION 3

STRATEGY

This section presents the strategy for conservation and development at the University of East Anglia. The overall objective is to manage the vulnerabilities identified in Section 2 so as to retain or enhance the significance identified in Section 1.

First come the Principles that should guide all activities in relation to buildings and landscape, in order to protect significance. Secondly, each element of the University is considered in turn – its significance is assessed, particular observations noted, and finally Policies for that element are presented. Each element-specific Policy is the result of applying one of the Principles to the element in question.

Finally, this section presents a method of impact assessment, showing how the Conservation Development Strategy can be used to evaluate any proposed change to the buildings or campus.

Principles

The purpose of the Principles set out in this section is to provide a guide to the development and care of the buildings, campus and landscape so as to retain their significance. The Principles define good practice and are not unique to UEA.

The Principles should be applicable to all the buildings and the whole of the Campus. Where appropriate Policies, as set out later in Section 3, indicate ways of applying the Principles in particular cases. Each Policy refers back to the number of the Principle on which it is based.

Explanation of terms

The following definitions have been used.

Alteration means modifying the existing fabric to meet new objectives.

Compatible use means a use which involves no change to the significant fabric, changes which are substantially reversible, or changes which require a minimal impact.

Conservation means the process of looking after a place so as to retain its significance. It includes maintenance and may according to circumstances include preservation, restoration and adaptation and will be commonly a combination of more than one of these.

Fabric means all the physical material of the place.

Maintenance means the continuous care of the fabric, contents and setting of a place, and is to be distinguished from repair.

Planned maintenance means a programme of preventative maintenance that is carried out before the breakdown or failure of the element or component, as opposed to unplanned or corrective maintenance which takes place after failure.

Policy means a plan of action for a specific element which should be followed when planning and carrying out work to that element.

Preservation means maintaining the fabric in its existing state and retarding deterioration.

Principle means a fundamental standard or rule to be applied to all work on the site and buildings.

Repair involves like-for-like replacement of materials.

Restoration means returning the existing fabric to a known earlier state. This is not to be confused with conjectural reconstruction.

Setting means a building's surrounding external area (including other buildings) which is seen in views of the building. Significant settings are those seen in important views of significant buildings.

Significance is assessed in a five-step hierarchy :

Very high significance Elements which are outstanding examples of their kind, of national or international importance.

High significance Elements that are excellent or rare examples of their kind, with architectural or landscape importance.

Significant Elements that are particularly good or unusual examples of their kind.

Some significance Elements that are typical or representative examples of their kind, but without special merit.

No significance Elements that do not contribute to, or that detract from, the significance of the University.

Note that assessments of significance relate solely to the elements' architectural and historic status, not their functional performance.

Principles

1 The Conservation Development Strategy should be applied whenever work to the buildings or landscape is being planned or carried out

- 1.1 The Conservation Development Strategy should be formally adopted by UEA.
- 1.2 The Conservation Development Strategy should be approved and adopted by the outside bodies that have roles affecting UEA, including Norwich City Council and English Heritage.
- 1.3 Copies of the Conservation Development Strategy should be passed to all consultants involved in work to the buildings and landscape, and it should be made available to all contractors.
- 1.4 The Conservation Development Strategy should be made available for information and consultation by all interested parties and members of the public.
- 1.5 UEA should refer to the Conservation Development Strategy and follow the Principles in it whenever work to the buildings or landscape is planned, commissioned or carried out.
- 1.6 The Conservation Development Strategy should be regularly reviewed and updated by UEA to ensure its continued relevance and use.

2 Coordinated planning procedures should be established and used

- 2.1 A system of planning and decision making, involving UEA, relevant specialists and outside bodies with roles affecting the University should coordinate the whole range of interventions to the buildings and landscape.
- 2.2 Systems of planning and decision making should work on the longest feasible timescale, to maximise opportunities for consultation, coordination and efficient working, and to minimise the risk of damaging actions.
- 2.3 Policies for *maintenance and management* should be incorporated in UEA's day-to-day maintenance activities and maintenance planning. Where these Policies affect listed buildings, the local planning authority should be informed that the Policies are being

pursued, referring to this Conservation Development Strategy. [*Policies of this type are tagged '2.3'*]

- 2.4 Whenever UEA wishes to carry out work to a listed building that is in accordance with a Policy for *refurbishment and alteration*, the local planning authority should be informed and detailed information about the way the Policy is to be carried out should be submitted to the local planning authority for comment, information and monitoring purposes, referring to this Conservation Development Strategy. [*Policies of this type are tagged '2.4'*]
- 2.5 Whenever UEA wishes to develop proposals that are in accordance with a Policy for *prospective improvements*, the local planning authority should be consulted, proposals should be developed in accordance with the Principles in this Strategy, and the proposals should be submitted to the local planning authority for planning and listed building consent, if appropriate, referring to this Conservation Development Strategy. [*Policies of this type are tagged '2.5'*]
- 2.6 Whenever UEA wishes to carry out work that is not covered by a Policy, proposals should be developed in accordance with the Principles in this Strategy and submitted to the local planning authority for planning and listed building consent, if appropriate, referring to this Conservation Development Strategy.

3 Work to the buildings and landscape should be planned on the basis of expert knowledge

- 3.1 Documents about the design, construction and alterations of the buildings and landscape should be recorded and catalogued by a librarian/archivist to provide a complete historical record, in a form that is easily accessible in the library or other agreed location.
- 3.2 Whenever non-maintenance work is carried out to the buildings and landscape, the structure, materials and services of both the existing and new work should be recorded, and the information added to the catalogue. This information should be used to inform revisions to the Conservation Development Strategy (see 1.6).
- 3.3 Whenever possible, knowledge about the buildings and landscape held by individuals should be recorded in suitable documentary forms, and the information added to the catalogue.

- 3.4 Work to the buildings and landscape should be planned by individuals and organisations who have made themselves familiar with their history, construction and significance, and who have proven expertise in the relevant field of work.

4 New development should respect the significance of the existing buildings and landscape

- 4.1 New development that would enhance the significance of the buildings or landscape should be carried out whenever there is a practical and affordable opportunity.
- 4.2 All new development in settings of *very high* or *high significance* should be designed to the highest standards.
- 4.3 New development that would detract from settings of *very high* or *high significance* should only be considered for the most compelling and exceptional reasons and any such development should be carried out so as to minimise any detrimental impact on the setting.
- 4.4 All new development in *significant* settings should be designed to equal and complement its setting as a minimum standard.
- 4.5 New development that would detract from *significant* settings should only be made if it meets an essential need of the University and any such development should be carried out so as to minimise any detrimental impact on the setting.
- 4.6 New development in settings of *some* or *no significance* should not normally be constrained for conservation reasons, so long as there are neither degradations nor damaging secondary impacts on settings of higher significance. Design quality should be a priority in all cases.

5 Alterations should respect the significance of the existing buildings and landscape

- 5.1 Alterations to the existing buildings or landscape that would enhance significance should be carried out whenever there is a practical and affordable opportunity.
- 5.2 Preservation should be a priority for elements of *very high significance*. Alterations that would detract from their significance should only be considered for the most compelling

and exceptional reasons and any such alterations should be carried out so as to minimise the damaging impact of the work.

- 5.3 Alterations that would detract from elements of *high significance* should be pursued only if there are no practicable alternatives that would lead to a reduced loss of significance.
- 5.4 Alterations that would detract from *significant* elements should only be made if they meet an essential need of the University and any such development should be carried out so as to minimise any loss of significance.
- 5.5 Alterations to elements of *some significance* or *no significance* should not normally be constrained for conservation reasons, so long as there are no secondary damaging impacts on elements of *higher significance*. Original materials in elements of *some significance* should be retained where possible.
- 5.6 Priority should be given to using *significant* elements in ways that are appropriate to their significance.
- 5.7 All alterations to *significant* elements should be designed and built to high standards of design, materials and workmanship, equivalent to those of the existing buildings.
- 5.8 Whenever possible, changes to *significant* elements should be carried out in ways that are reversible, rather than in ways that are irreversible.
- 5.9 During alteration work, every opportunity should be made to improve the environmental performance of the building stock, in ways that avoid or minimise any detraction from significance.

6 Management, maintenance and repair activities should respect the significance of the buildings and landscape

- 6.1 The buildings and landscape and should be cared for by a planned maintenance programme based on a complete knowledge of the elements and their significance, with regular inspections and preventative action.
- 6.2 Where *significant* elements of buildings or landscape have deteriorated, they should be replaced, repaired or restored in such a way as to regain significance. Original building

elements that are worn or weathered should be repaired or restored rather than replaced, so long as they are still serviceable.

6.3 Repairs to *significant* original material should retain the original qualities, in particular:

- colour, texture, reflectivity, geometry,
- dimensional accuracy and precision of joints,
- resistance to physical deterioration,
- security and fire resisting properties.

6.4 Maintenance and repair work to *significant* elements should be carried out by persons who are qualified and experienced in working with the relevant materials.

6.5 Care should be taken to supervise and, where relevant, train operatives to ensure that fabric is not damaged by maintenance and repair activities.

6.6 Particular attention should be paid to keeping in good order roofs, gutters and rainwater drainage systems to conduct water safely away from the buildings.

6.7 Evidence of defects should be reported and investigated, and remedial work prioritised to minimise damage.

6.8 When practicable and affordable, makeshift alterations carried out in the past should be removed or modified to ensure that they do not detract from significance or present a threat to the fabric.

6.9 During repair or maintenance work, every opportunity should be made to improve the environmental performance of the building stock, in ways that avoid or minimise any detracting from significance.

7 Service systems should be appropriate to the architectural character of the buildings

7.1 Wherever practicable, uses should be assigned to parts of the building whose inherent characteristics provide suitable environmental conditions with minimal reliance on service systems.

- 7.2 Service systems for lighting and heating should be designed to enhance the significance of spaces they serve, in terms of (i) the environmental conditions created, and (ii) the visual and acoustic impact of the system components.
- 7.3 The replacement of old service systems by new systems that perform better should not normally be constrained for conservation reasons, so long as the new systems avoid or minimise damaging impact on significance.
- 7.4 Where components of old service systems are significant but functionally obsolete, redundant ducts or openings should be sealed to protect the integrity of the fabric whilst retaining the components' visual appearance.
- 7.5 When new service distribution networks are necessary, alternative distribution routes should be thoroughly investigated to identify routes that avoid or minimise damaging impact on significant elements.
- 7.6 When practicable and affordable, makeshift insertions of service systems carried out in the past should be removed or modified to ensure that they do not detract from significance or present a threat to the fabric.
- 7.7 Service systems should be provided with access to allow for maintenance and renewal with minimum disruption to the fabric.

Elements

The elements of the University are considered individually, in more detail for the listed Lasdun buildings than for the later buildings. The typical entry for each element has three sections:

Significance

The assessment of each element's significance is based on the information in Sections 1 and 2 of the Conservation Development Strategy. It is derived from comparing the elements with relevant exemplars of the same period and character, and aims to present a consensus of current informed opinion, synthesising the views of the project team, the project advisory group and the consultees listed in the Introduction.

There are continuous gradations of significance. For convenience, the following five-step hierarchy is used:

Very high significance Elements which are outstanding examples of their kind, of national or international importance.

High significance Elements that are excellent or rare examples of their kind, with architectural or landscape importance.

Significant Elements that are particularly good or unusual examples of their kind.

Some significance Elements that are typical or representative examples of their kind, but without special merit.

No significance Elements that do not contribute to, or that detract from, the significance of the University.

Note that the assessments in the Conservation Development Strategy relate solely to the elements' architectural and historic significance, not their functional performance or usefulness. Recent buildings may appear to be under-valued, but the assessment reflects the fact

that conservation issues have not yet become an important consideration in the management of these newer buildings.

Observations

Where appropriate, points about the particular element are set out here. This is not intended to be a systematic survey, but it points out features – sometimes quite small – that should be taken into account when any work to the element is being considered.

Policies

Policies are included for some elements indicating how the Principles should be applied to the particular element. This is not exhaustive. As new situations arise, the Policies should be revisited, new Policies generated, and superseded Policies removed.

Each Policy is cross-referenced to the relevant Principles that are being applied.

Policies are of three types:

1. Policies for *maintenance and management*, emphasising important points to be incorporated in day-to-day maintenance activities and maintenance planning. No change to the fabric is involved, and no consents are required. (See Principle 2.3)
2. Policies for the *refurbishment and lateration* of the fabric, where the scope of work and the important characteristics to be aimed for can be set out in some detail. UEA should be able to proceed with work that is in accordance with Policies of this type without seeking further consents. (See Principle 2.4)
3. Policies which identify *prosepective improvements* in strategic terms only, where the ways of implementing the Policy have not been explored. If UEA wishes to proceed with Policies of this type, consents will be required. (See Principle 2.5)

The Campus as a whole

Policies:

Architectural leadership

The conservation and development of the built environment at UEA should continue to be subject to high level architectural guidance, by a senior architect within the University or an external consultant architect, who takes a central role in long-term planning and the monitoring of on-going projects.

Architectural conservation

The architectural heritage of UEA should be protected for the future. This involves the conservation of significant buildings, most notably Lasdun's ziggurats, Teaching Wall and Library and Foster's Sainsbury Centre for the Visual Arts. Important characteristics of significant buildings, both individually and as architectural groupings, should be identified and retained, whilst allowing refurbishment to be carried out in response to changing University needs.

Architectural development

All proposals for new buildings on the UEA Campus should be developed to a high standard of design that is equivalent to the original architecture of UEA, but not necessarily of the same character. New buildings should form an integrated whole in combination with the existing architecture, and the principles of site development set out in Lasdun's Development Plans should be respected. New buildings should avoid detracting from existing significant buildings.

Landscape leadership

A new landscape strategy should be formulated for the conservation and development of the landscape at UEA. The strategy should guide long-term planning and also provide a practical basis for maintenance and management of the landscape.

Landscape conservation

The landscape heritage of UEA should be protected for the future. This involves the conservation of significant landscape, in particular the parkland landscape of the Yare valley which includes UEA's buildings as part of the landscape composition. Conservation of the landscape involves the management and periodic replacement of planting, and interventions to retain significance whilst responding to changes both within and outside UEA's site boundary.

Landscape development

As an integral part of all new development on the UEA Campus, new landscape proposals should be developed and implemented, to a high standard that is equivalent to the original UEA landscape but not necessarily of the same character. New landscape should form a whole with, and avoid detracting from, the existing Yare valley parkland landscape.

Campus-wide coordination

The built environment and landscape at UEA should be managed so as to minimise the proliferation of piecemeal alterations that would lead to a degeneration of the visual environment. Where appropriate, Campus-wide strategies should be developed to coordinate signage, lighting, street furniture, traffic and parking, disabled access, etc.

Buildings by Denys Lasdun & Partners

General policy for Lasdun buildings

Refurbishment & alteration

Concrete repairs UEA appointed a forensic structural engineer to carry out investigative work on the concrete. A *Concrete Preservation Plan* (CPP) was prepared for the whole of the campus, including the listed Norfolk and Suffolk Terraces, Teaching Wall and Library. The recommendations of the CPP must be considered in conjunction with the local authority for each element. An acceptable method of repair was developed. The quality of the repairs is imperative to the success of the work. Samples must be prepared for comparison with existing repairs before any further work is carried out. (2.4, 6.2, 6.3, 6.4)

In carrying out concrete repairs, every effort should be made to achieve the following:

- same texture as original
- similar colour to the least weathered original concrete
- improved durability to eliminate or reduce the risk of deterioration in the future
- constituents as similar as possible to the original, subject to achieving improved performance
- on-going maintenance plan.

Residences – ‘ziggurats’

Listed Grade II*.

Front (south) Elevation

Assessment: Very high significance

Observations:

The distant view of the south aspect of the ziggurats is the most important architectural composition at UEA. Norfolk Terrace to the west had six bays, Suffolk Terrace to the east has four bays.

The original black timber windows have been replaced with dark-coloured aluminium windows in the same configuration, with narrower profiles for the sliding sashes (the high level fixed lights always had slender framing). The difference is particularly noticeable in the central mullion.

The original straw-coloured ‘pinoleum’ roller blinds have been replaced by dark curtains. The contrast between original pale blinds and dark window frames emphasised the window configuration: this is now much less conspicuous.

In most cases the internal window sill is at the level of an external flat roof. Originally the flat roof areas were tiled for use as terraces, accessed through the windows. For health and safety reasons access to the flat roofs/terraces is now prohibited, and the windows have opening restrictors and bars. The opening restriction reduces ventilation in hot weather – overheating is a problem.

Policies:

Maintenance & management

Landscape Keep the open landscape running right up to south face of ziggurats. (2.3, 5.2)

Refurbishment & alteration

Windows Future window replacement should re-establish the original window appearance. (2.4, 5.2, 6.8)



The south front of the ziggurats – which are actually cranked terraces – showing the roof terraces which were intended for use by the students. This has now been stopped for health & safety reasons.

New windows should have the following characteristics:

- same configuration of opening and fixed lights
- dark colour
- thicker sections corresponding to the original timber windows

Replacement programme Establish a programme of replacement for windows and curtains/blinds: this should be done systematically, not piecemeal. (2.2, 2.4)

Prospective improvements

Roof terraces Every effort should be made to find a practical, affordable, and visually acceptable way of making the roof terraces usable by the students. (2.5, 5.6, 6.8)

Rear (north) Elevation

Assessment: High Significance

Observations:

The north elevation is an extreme contrast with the south elevation, being windowless and hard – undoubtedly this was a deliberate intention. Originally cars parked under the overhangs. North-facing and therefore almost always in shadow. Although a powerful architectural gesture, there is absolutely nothing charming. At present this side of the ziggurats is chaotic and ugly – not a positive feature of the campus.

The original design intention involved more insitu concrete work on this side of the ziggurats, but the extent of precasting was increased at a late stage. Thus the setting out of panel joints and junctions is less refined than for the study-bedrooms.

Some parts of the north elevation are covered by climbers. This is successful as concrete looks better in conjunction with other materials, but growth must be kept under control. The climbers will be removed to carry out the current concrete maintenance plan.

Tall metal ventilation pipes were added shortly after the buildings were completed. They are now rusting.



There is now extensive and disorganised planting on the north side of the ziggurats.

Policies:

Maintenance & management

Undersized planting beds and planters should be removed. Any hard or soft landscaping should match the vigour and scale of the buildings. (2.3, 6.8)

Chaotic and adhoc intrusions should be removed. (2.3, 6.8, 7.5)

Climbing plants should be replanted in accordance with a landscape plan after concrete maintenance, and maintained to avoid damage to the fabric. (2.3, 6.6)

Refurbishment & alteration

A signage plan should be implemented using the original lettering style (Univers Bold). (2.4, 6.8)

New signs should have the following characteristics:

- All signage should be in accordance with a signage plan for the campus which takes account of all legal and DDA requirements
- The original lettering should be used for all the main headings
- Sub-headings and instructions should not detract from the main headings
- Signs should be adequately lit and weather and vandal-proof
- Signs should be changeable as functions on the campus change.

Prospective improvements

Hard landscaping should be upgraded to enhance the environmental quality. (2.5, 5.1)

External circulation – high-level walkway and bridges

Assessment: High Significance

Observations:

Norfolk Terrace was supposed to be extended to the east and Suffolk Terrace to the west, so the end walls would not have been permanently visible. The walkways would also have



A few offices have taken space in the ziggurat residences. This is the Norfolk Terrace walkway.

extended and are now brutally terminated. At the 'harbour' ends, the terraces terminate neatly and have access stairs.

The high level bridge between Norfolk Terrace and the Teaching Wall walkway has been removed, although the services that used to be concealed below the bridge remain in place. The bridge had severe concrete corrosion.

The Norfolk Terrace walkway now forms a long dead-end.

Some of the narrow 'slots' which created a physical separation between the stairs or walkways and accommodation blocks have been filled.

Policies:

Refurbishment & alteration

The narrow 'slots' between the stairs or walkways and accommodation should be opened up, but treated in such a way as to conform to safety standards and DDA requirements. (2.4, 6.8)

Prospective improvements

The connection between walkway at the west end of Norfolk Terrace and ground level or Teaching Wall walkway should be improved. (2.5, 5.1, 6.8)

Internal circulation – access stairs

Assessment: High significance

Observations:

The stairs are steep and dramatic. There are no lobbies at the walkway entrances to the access stairs, just small canopies, some of which require concrete repairs.

At each level, only one door from the access stairs can be opened into a 'habitat'. The second door can only be used as an exit.



High-level walkway on the north side of Norfolk Terrace. The walkway is an integral part of the ziggurat, unlike the Teaching Wall walkway which is an independent structure. The tall metal flues appeared shortly after the ziggurats were completed.

Internal circulation – corridors

Assessment: Significant

Observations:

The corridors are very compact with low ceilings and no natural light, risking a feeling of claustrophobia.

They have been degraded by wear and tear and adhoc intrusions. The original recessed wall lights have been replaced by surface mounted ceiling lights, which are particularly obtrusive when the ceiling is so low. The new lights give the required light levels for escape corridors.

The corridors are stuffy due to lack of ventilation. Formerly there were ventilation slots over bedroom door heads, which are now sealed because of fire regulations.

Policies:

Refurbishment & alteration

Finishes See study bedrooms.

Services Adhoc surface-mounted services should be removed wherever possible, or organised in orderly routes. When new ducts are necessary, they should be discreet and carefully designed, not ad-hoc. (2.4, 7.3, 7.5)

Corridor lighting should revert to recessed wall light fittings between study-bedroom doors, using new fittings. (2.4, 7.3, 7.5)

New light fittings should have the following characteristics:

- sufficient output to illuminate the corridors to H&S requirements
- compliant with DDA requirements
- good illumination onto ceiling
- diffusers to prevent glare
- white fittings of simple geometrical shape
- emergency lighting incorporated in same fittings
- re-use of original ducts where possible to eliminate surface-mounted wiring.

Provide improved ventilation in the corridors. (2.4, 7.2, 7.3)



The corridors are tightly dimensioned, but have become cluttered with surface-mounted lights and services.

The layout and design of the ventilation and duct runs must be considered in relation to the re-design of the corridors and bedrooms - to ensure the finished installation is efficient and to minimise any impact on the original fabric.

- external locations of vents must be carefully considered and must cause minimal impact.
- wherever possible external vents should be restricted to the rear (north) elevations.
- heat recovery should be used if possible.
- external and internal vent covers should be unobtrusive and in a colour to match the background colour.

Internal accommodation – study bedrooms and double bedrooms

Assessment: High significance

Observations:

The main elements of the rooms remain unchanged. The smooth pre-cast concrete wall and ceiling units are painted with emulsion. Carpet (originally Wilton) was laid directly to the concrete floors.

The original purpose-made wardrobe, bookshelves, washbasin, bed, desk and pin-up board are all grouped on one side of the room. The furniture is removable to allow access to the pipe runs. The fittings are showing signs of dilapidation.

Elements which have been changed are the windows, blinds and light fittings. The originally single-glazed softwood windows have been replaced by dark-coloured double glazed aluminium windows, which are fitted with restrictors to stop the windows opening more than 100mm to prevent access onto the terrace.

The original straw-coloured timber roller blinds have been replaced by dark curtains. The blinds did not provide adequate light control.

The original services in the rooms comprised: an under-window radiator (remaining), an electric wall socket by desk (now made into a double socket), an 'Anglepoise' lamp on a loose flex with two mounting brackets, a wash basin and a wall light by the basin. The following services have been added: ceiling mounted smoke detector, a computer point and a telephone point. The new services have surface mounted wiring.



Some of the original study fittings are worn and in need of refurbishment.

Policies:

Refurbishment & alteration

Fitted furniture The original fitted furniture, which makes efficient use of space and conceals the service runs, should be retained where practical and damaged components repaired or, when necessary, replaced with similar components. Where existing provision is inadequate, new furniture designs should be based on a study of current requirements and should maintain the character of the original. (2.4, 5.3, 6.2)

Blinds/curtains Straw-coloured blinds or curtains should be re-installed to give uniform external appearance and emphasise the pattern of glazing bars in the windows. There is no need to wait until windows are replaced. (2.4, 6.2, 6.3, 6.8)

Finishes Investigations should be carried out to ascertain original finishes and colours. Original finishes and colours should normally be retained or re-established. (2.4, 6.2, 6.3)

- wall and ceiling finishes should remain white emulsion paint
- floor finish should be carpet and consideration should be given to re-establishing the original dark colours
- joinery should be painted with the exception of the duct/rail behind the bed which was originally unpainted timber: whenever this is replaced the new duct should be sealed but not painted.

Services Existing services ducts or trunking should be utilised for service runs. If they are not adequate then consideration should be given to the provision of new service ducts. When new ducts are necessary, they should be discreet and carefully designed, not adhoc. Surface mounted wiring should be kept to a minimum. (2.4, 7.2, 7.3, 7.4)

Replacement electrical sockets and switches should have similar characteristics to the original fittings:

- located in original cut-outs and recesses for electrical back-boxes where practicable
- the same size and colour
- similar profiles to original
- compliant with DDA requirements.

A proprietary range should be selected and used consistently.

Replacement radiators should have similar characteristics to the original fittings:

- the position under the window should be retained
- similar size and colour
- similar profiles to original.

A proprietary range should be selected and used consistently.

Insulation Any opportunity to improve the internal thermal insulation of the external walls or floors/ceilings and the acoustic insulation of the floors should be exploited. (2.4, 5.9, 6.9)

Internal accommodation – breakfast room

Assessment: High significance

Observations:

These rooms occupy strategic locations at the outer ‘points’ of the ziggurats. They provide an attractive social centre for the 12-room ‘habitat’.

Most of the breakfast rooms have been refitted, not to a consistent pattern: the original layout with a central island unit with seating around the perimeter proved unsatisfactory. There are opportunities to improve the quality of these rooms.

These rooms are no longer fitted with blinds, so they are conspicuous when the ziggurats are viewed from the south.

Policies:

Refurbishment & alteration

The breakfast rooms should be refitted to high standard, following a consistent pattern. As far as practicable, new layouts should retain or re-establish significant features of the original layout. (2.4, 5.4, 5.6, 6.2, 6.8)

Extractor fans should be installed, in an inconspicuous way. (2.4, 7.4)



The kitchens have panoramic views to the south. They no longer have the original layout or fittings.

The layout and design of the ventilation and duct runs must be considered in relation to the overall layout of the breakfast rooms to ensure the finished installation is efficient and to minimise any impact on the original fabric.

- external locations of vent must be carefully considered and must cause minimal impact
- heat recovery should be used if possible
- external and internal vent covers should be unobtrusive and in a colour to match the background colour.

Insulation Any opportunity to improve the internal insulation of the external walls or floors/ceilings should be exploited. (2.4, 5.9, 6.9)

Internal accommodation – single tutor’s flat

Assessment: High significance

Observations:

As for the study bedrooms.

Policies:

Refurbishment & alteration

As for the study bedrooms.

The bathrooms should be re-designed to modern standards. (2.4, 7.3, 7.4)

Fittings and finishes should have similar characteristics to the original:

- similar style and colour
- a proprietary range should be selected and used consistently.

Internal accommodation – Porters' rooms

Assessment: No significance

Observations:

Now used as the maintenance supervisor's office and other administrative rooms. The original furniture has been removed. The adjacent private toilets remain with the original fittings and finishes.

Internal accommodation – games room

Assessment: Some significance

Observations:

Spaces have interesting plans and high ceilings. Windows have been boarded over in some rooms. None are used as student social spaces. The rooms are now generally used as seminar rooms or for storage.

Policies:

Maintenance & management

Consideration should be given to re-establishing use of the rooms by students. (2.3, 5.6)

Whenever a requirement for a communal student space is identified consideration should be given to using these games rooms if:

- the function would not detract from the character and setting of this historic location
- the function would not detract from the main use of these buildings as student residences.
- the existing form of the rooms, which are not standard, is appropriate
- the existing spaces have the appropriate services, or that new services could be brought into the spaces
- there would be no compromise of Health & Safety regulations or the DDA.

Internal accommodation – toilets and washrooms

Assessment: No significance

Observations:

These areas are cramped, heavily worn, old-fashioned, poorly ventilated and not up to present day standards.

Some of the shower rooms have two shower trays and a bench in one room. Shared showers are unacceptable. The shower trays are raised making the headroom only about 1.8m.

The lack of fresh air supply to into the corridors has resulted in inadequate ventilation in the washrooms.

Policies:

Refurbishment & alteration

The toilets and shower rooms should be re-designed to modern standards. (2.4, 7.3, 7.4)

Fittings and finishes (but not necessarily layout) should have similar characteristics to the original:

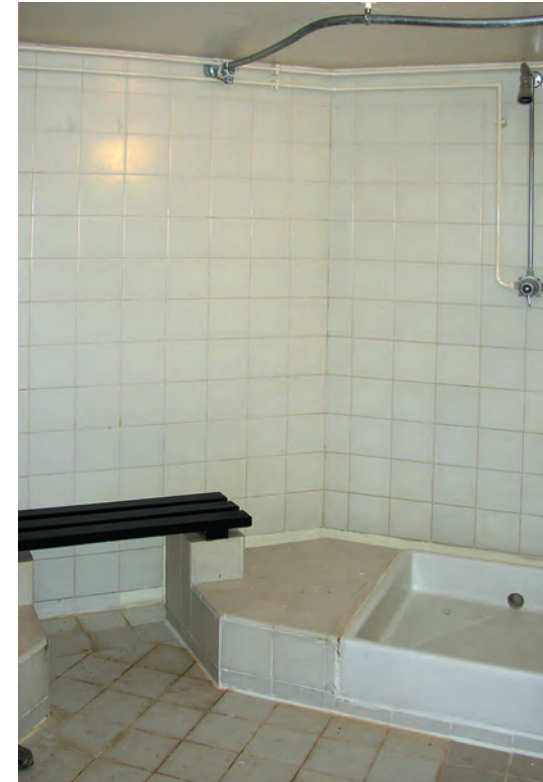
- similar style and colour
- a proprietary range should be selected and used consistently.

Better ventilation should be provided for the toilets and washroom. (2.4, 7.3, 7.4)

The layout and design of the ventilation and duct runs must be considered in relation to the overall layout to ensure the finished installation is efficient and to minimise any impact of the original fabric:

- the external locations of vents must be carefully considered and must cause minimal impact.
- wherever possible external vents should be restricted to the rear (north) elevations.
- heat recovery should be used if possible.
- the external and internal vent covers should be unobtrusive. They should be in a colour to match the background colour.

Insulation Any opportunity to improve the internal insulation of the external walls or floors/ceilings should be exploited. (2.4, 5.9, 6.9)



The shower rooms with two raised shower trays and no privacy.

Internal accommodation – plant room

Assessment: No significance

Teaching Wall

Listed Grade II.

The first blocks were by Denys Lasdun & Partners: Chemistry, Biology and Arts I. The later blocks were by Feilden & Mawson following Lasdun's design principles: Arts II, Mathematics & Physics (later incorporated in Environmental Sciences), Environmental Sciences.

The most visible difference between the phases is internal. The Lasdun blocks have exposed precast concrete T-beam ceilings, while the Feilden & Mawson blocks have flat concrete slabs.

Lasdun's Development Plans proposed much more Teaching Wall accommodation. The west end of the Teaching Wall and the north end of the Arts Spur have 'temporary' screen walls.

Front (south) Elevation

Assessment: High significance

Observations:

The 460m long south elevation of the Teaching Wall is seen in the background in important views of UEA across the Broad.

There are several *ad hoc* concrete block extensions which are intrusive elements that detract from the building.

Service cores and divisions between departments are suppressed on the continuous south façade.

Solar heat gain is a problem although shading is tackled consistently at every opportunity.

The windows are cleaned by specialists abseiling down from the parapet.



The south side of the Teaching Wall, from Arts II.

Proliferation of rooftop services, mainly extract ducting and telecomms aerials, has become visually intrusive.

Policies:

Maintenance & management

Heat gain An assessment should be made regarding this problem and a rectification strategy prepared.

Refurbishment & alteration (these Policies also apply to the north elevation of the Teaching Wall)

Ad hoc extensions The removal of *ad hoc* concrete extensions should be considered when practical and affordable.

Roof A strategy for organising the proliferation of rooftop plant and services has been established, to ensure that new services do not compete with or visually impair the original service towers and roof profile. (2.4, 7.4, 7.5)

Windows Future replacement windows should retain the main characteristics of the original window appearance. (2.4, 6.3)

New windows should have the following characteristics:

- same configuration of opening and fixed lights
- dark colour
- similar sections corresponding to the original windows

Every opportunity should be taken to improve the thermal performance of the windows. (2.4, 5.9, 6.9)

Any roof safety barriers should be as unobtrusive as possible and practicable, and be set back from the face of the building wherever possible. (2.4, 5.3)



Teaching Wall roof: services and extract ducts have proliferated over the scientific departments.

Rear (north) Elevation

Assessment: High significance; except north elevation of Arts Spur: Significant

Observations:

Service cores are prominent on the north elevation.

The biology plant room, stair and WC towers have undergone a major refurbishment project for concrete repairs.

Originally there were only fire escape and service entrances on the north façade of the Teaching Wall. New buildings have bridge connections.

The north elevation of the Arts spur is a temporary screen wall. Lasdun intended that it would connect to a second teaching wall. The spiral escape stair signifies that Lasdun expected the building to be extended.

Policies:

Prospective improvements

When practical and affordable, an extension could be added to the Arts Spur, to provide additional floorspace and improve the quality of the building and the setting. (2.5, 4.1, 4.5, 5.1)

Consideration should be given to utilising the 'knock-out' panels in the original construction when the extension connects to the original building. (2.5, 5.8)

East Elevation

Assessment: High significance

Observations:

The freestanding columns of the east elevation were intended to mark the entrance to the campus. One of the main pedestrian access routes passes under this colonnade.



The north side of the Teaching Wall, showing the Chemistry service core.



The east elevation of the Teaching Wall in about 1971, after the completion of Arts II but before the Registry was built.

Policies:

Refurbishment & alteration

The architectural feature of the colonnade should be exploited more positively, eg. by lighting, signage, landscaping and acknowledgement of the original architect. (2.4, 5.1, 5.6)

West Elevation

Assessment: Significant

Observations:

The west end of the Teaching Wall was never intended as a finished elevation. Lasdun planned to extend the Teaching Wall by another 100m.

The spiral escape stair signifies that Lasdun expected the building to be extended.

Policies:

Prospective improvements

When practical and affordable, an extension of high design quality could be added to the west elevation, to provide additional floorspace and improve the quality of the building and its very important setting. (2.5, 4.1, 4.5, 5.1)

External circulation – high-level walkway and bridges

Assessment: High Significance

Observations:

Improvements to surfaces need to be considered in respect of DDA requirements for surface treatment and visibility.

The south side of the walkway next to the landscape 'harbour' has railings rather than a parapet, presumably to give an open outlook to the harbour and the landscape beyond. Intermediate rails have been added.



The 'unfinished' west elevation of the Teaching Wall with projecting nibs that were intended to link with a continuation of the building, and a 'temporary' spiral stair.



Main service runs are located under the walkways.

The main horizontal services distribution runs are beneath the walkways.

The walkway alongside the School of Environmental Sciences was built at the same time as this segment of the Teaching Wall. Originally the School of Biological Sciences was reached via the Norfolk Terrace walkway.

The spiral stair from the plaza at the west end is an inadequate way of connecting the walkway system to the west end of the campus, where pedestrian circulation is at ground level.

The walkways are listed Grade II along with the rest of the Teaching Wall.

Policies:

Prospective improvements

When practical and affordable, reinstate the bridge to Norfolk Terrace. (2.5, 6.8)

When practical and affordable, improve the connection to ground level from the raised plaza at the west end of the walkway system. (2.5, 4.1, 5.6)

Assess surface alterations to enable compliance with DDA requirements. (6.1)

Internal circulation – stairwells, entrances and corridors

Assessment: Some significance

Observations:

All entrances to Schools now have electric sliding doors.

Some areas retain Columbian pine panelling with fairface concrete. This combination of materials is successful.

The original lifts are utilitarian, designed with minimum comfort levels and do not comply with current disability standards. Lifts are currently being replaced, and consistency of replacement lifts should be maintained.



A Teaching Wall corridor that retains Columbian pine panelling. The suspended ceiling and lighting have been changed.

Policies:

Maintenance & management

Finishes Original finishes should be retained or reinstated. (2.4, 6.2, 6.3, 6.8)

Any unpainted surfaces should remain unpainted.

Ceilings which have been painted should be painted white.

Walls which have been painted should be predominantly painted dove white.

New false ceilings should not be introduced in any original Lasdun spaces.

All original joinery is in Columbian pine timber and veneers. Some replacements have been made with other timbers or veneers. The original materials and veneers should be retained and where possible re-established.

Internal accommodation – offices, teaching spaces and seminar rooms

Assessment: Some significance

Observations:

The main elements of the rooms remain unchanged. The smooth pre-cast concrete wall and coffered ceiling units are painted with emulsion. Floor finishes are linoleum flooring laid directly to the concrete floors in some areas and carpet in others.

Policies:

Refurbishment & alteration

Finishes Original finishes should be retained or reinstated. (2.4, 6.2, 6.3, 6.8)

Any unpainted surfaces should remain unpainted.

Ceilings which have been painted should be painted white.

Walls which have been painted should be predominantly painted dove white.

New false ceilings should not be introduced in any original Lasdun spaces.

All original joinery is in Columbian pine timber and veneers. Some replacements have been made with other timbers or veneers. The original materials and veneers should be retained and where possible re-established.

Services Existing services ducts or trunking should be utilised for service runs. If they are not adequate then consideration should be given to the provision of new service ducts. Surface mounted wiring should be kept to a minimum. (2.4, 7.4)

Replacement lighting, electrical sockets and switches should have similar characteristics to the original fittings:

- located in original cut-outs and recesses for electrical back-boxes where practicable
- the same size and colour
- similar profiles to original
- compliant with DDA requirements.

A proprietary range should be selected and used consistently.

Replacement radiators should have similar characteristics to the original fittings:

- the position under the window should be retained
- similar profiles to original

A proprietary range should be selected and used consistently.

Insulation Any opportunity to improve the internal insulation of the external walls or floors/ceilings should be exploited. (2.4, 5.9, 6.9)

Internal accommodation – laboratories

Assessment: Some significance

Observations:

Refurbishment schemes are constantly under way to re-fit the laboratories.

Advances in scientific techniques and health and safety regulations mean that it is becoming difficult to accommodate research laboratories in the Teaching Wall. The spaces are more suitable for teaching laboratories, but even these require increased provision of services and



Some chemistry laboratories retain the original fittings of the 1960s, but the laboratories are being refitted using more modern equipment. Note ceiling of exposed, unpainted precast concrete T-beam and original light fittings.

extract cupboards. If laboratory uses relocate elsewhere, the accommodation should be suitable for re-use in alternative ways.

Policies:

Refurbishment & alteration

Finishes Original finishes should be retained or reinstated. (2.4, 6.2, 6.3, 6.8)

Any unpainted surfaces should remain unpainted.

Ceilings which have been painted should be painted white.

Walls which have been painted should be predominantly painted dove white.

New false ceilings should not be introduced in any original Lasdun spaces.

Fitted furniture The original fitted furniture should be retained where practical and compatible with current demands. Damaged components should be repaired or, when necessary, replaced with similar components. Where it is necessary to completely replace furniture, due to excessive damage or to comply with regulations, the characteristics of the original laboratories should be retained if possible. (2.4, 6.2, 6.3)

Services Special light fittings between T-beams should be repaired or replicated where practicable. Replacement of these lights should be recorded. (2.4, 3.2, 6.2, 6.3)

Insulation Any opportunity to improve the internal insulation of the external walls or floors/ceilings should be exploited. (2.4, 5.9, 6.9)

Library

Listed Grade II.

The Library was constructed in two phases, 1966-68 (north) and 1972-74 (south). For phase 2 Denys Lasdun & Partners were design architects and Feilden & Mawson executive architects. A line of paired columns marks the break internally, but it is not evident externally.

Library – exterior

Assessment: High Significance

Observations:

Lasdun's Development Plan Drafts II and III show the Library being extended to the east to form a square on plan. However, he built a permanent rather than a temporary east elevation.

The first phase of the eastward expansion was built in 2004-05, designed by Shepherd Epstein Hunter architects.

Library – interior

Assessment: Significant

Observations:

The main elements of the spaces remain unchanged. There are problems because the external envelope is poorly sealed, and there are also overheating problems. The original shelving layout does not comply with disabled access requirements.

The smooth pre-cast concrete walls and ceiling units are painted, in some areas, with emulsion. Concrete ceilings in perimeter bays remain unpainted. There is a suspended ceiling in the centre of the building. There are fairface concrete structural columns. No skirting. Concrete walls have shallow recesses for light switches and sockets. Some are now redundant. Some new switches have been mounted in other positions. Some new services in surface mounted conduits.



Library: south-west elevation. This phase of the building was completed in 1974.

Original wall lights have been removed and positions are covered over. Some new large surface strip lights in stairwell.

Windows are the original dark green/grey aluminium sections. Much of the single glazing has been replaced with double glazing without loss of significance. Some energy-inefficient single glazed high level louvres still in use. Doors are generally original with Colombian pine veneer and architraves. Some windows have curtains utilising the original tracks.

Carpet and underlay is laid directly to the concrete floors.

Original study carrels are still in use. Doors are very narrow and there are no ceilings in these spaces.

The construction of the main stairs is a combination of insitu and precast concrete. Balustrading is a low concrete wall with a tubular rail above. The ceiling has been covered with thin acoustic tiles, some of which have fallen off.

The main staircase has been separated from the main spaces with new doors glazed with Georgian wired glass.

Policies:

Maintenance & management

There is some graffiti on the concrete walls next to the perimeter writing tables. Cleaning methods should be tested, agreed and the graffiti removed. (2.3, 6.2)

Refurbishment & alteration

Finishes Original finishes should be retained or reinstated. (2.4, 6.2, 6.3, 6.8)

Any unpainted surfaces should remain unpainted.

Ceilings which have been painted should be painted white.

Walls which have been painted should be predominantly painted dove white.

New false ceilings should not be introduced in any original Lasdun spaces.

All original joinery is in Columbian pine timber and veneers. Some replacements have been made with other timbers or veneers. The original materials and veneers should be retained and where possible re-established.



Library: workstations around the perimeter, some with views over the Yare valley, and bookstacks in the inner part of the plan.

Services Existing services ducts or trunking should be utilised for service runs. If they are not adequate then consideration should be given to the provision of new service ducts. Surface mounted wiring should be kept to a minimum. (2.4, 7.4, 7.5)

Replacement electrical sockets and switches should have similar characteristics to the original fittings:

- existing cut-outs and recesses for electrical boxes utilised
- the same size and colour
- similar profiles to original.

A proprietary range should be selected and used consistently.

Replacement light fittings should run in parallel and be coordinated with the shelving rather than irregular replacement fittings or irregular false ceilings, as previously installed on the ground floor.

Replacement radiators should have similar characteristics to the original fittings:

- the position under the window should be retained
- similar profiles to original

A proprietary range should be selected and used consistently.

Any opportunity to improve the internal insulation of the external walls or floors/ceilings should be exploited. (2.4, 5.9, 6.9)

Lecture Theatres

Lecture Theatres – exterior

Assessment: Significant

Observations:

An economical building which lacks architectural excitement but is well-mannered.

No outlook onto the landscape 'harbour'.



Lecture Theatres – interior

Assessment: Some significance

Observations:

The main elements of the spaces remain unchanged. The fairface blockwork walls are now painted with vandal-proof paint. Carpet and underlay is laid directly to the concrete floors.

There is a suspended ceiling in the foyer similar to that in the library. No skirting. Concrete walls have shallow recesses for light switches and sockets. Some are now redundant. Some new switches have been mounted in other positions. Some new services in surface mounted conduits.

The construction of the main stairs is a combination of insitu and precast concrete. The guarding is a low concrete wall with a tubular rail above. The ceiling has been covered with thin acoustic tiles, some of which have fallen off. The steps are carpeted.

A new steel and glass lift to all levels has been constructed and the layout of some of the minor rooms has been altered. The signage plan on each level has not been updated to show the new lift and room layout.

The false ceiling of the main lecture theatre was omitted to provide additional volume, so that the room would be suitable for music.

The doors, panelling and joinery are in Columbian pine.



The blank south-west elevation of the Lecture Theatre block, facing the harbour. The external stairs to the Library walkway are little used.

Policies:

Refurbishment & alteration

Any opportunity to improve the internal insulation of the external walls or floors/ceilings should be exploited. (2.4, 5.6, 6.9)

Computing Centre

Computing Centre – exterior

Assessment: Phase 1 (east) Some significance; Phase 2 (west): No significance

Observations:

The eastern part by Denys Lasdun & Partners, completed in 1968. It is their least successful building at UEA.

The first computer was installed in 1968.

Expansion of the original building to the west was anticipated by DLP, in a mirror image configuration. However, the western extension, designed by Feilden & Mawson, was added in 1981-82 in a different configuration projecting into the harbour.

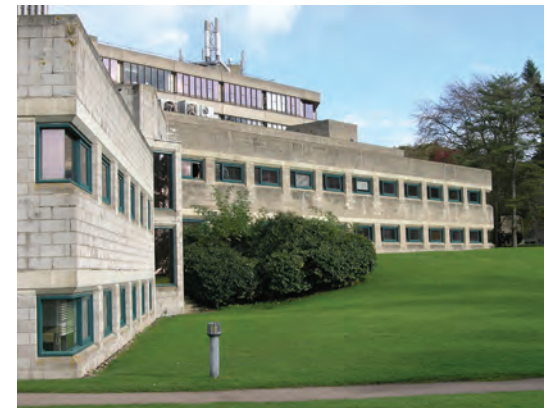
Later alterations include bridging the moat which used to separate the walkway from the Computer Centre with steel grating. Originally entered at a half-level below the walkway; a walkway level entrance has been added.

Plans for a new lift are currently being developed.

Policies:

Prospective improvements

When practicable and affordable, the Computing Centre could be replaced with a higher quality building making better use of a pivotal site on the campus. (2.5, 4.1, 4.2)



The Computing Centre is one of the weakest Stage 1 buildings, but occupies an exceptionally important site.

Computing Centre – interior

Assessment: No significance

Observations:

Many adhoc alterations.

Generally fairfaced blockwork. It is now varnished or painted.

The balustrading of the stairs is in blockwork (now varnished). Terrazzo floor.

Doors and joinery in Columbian pine. Simple rectangular section skirting of Columbian pine. Some doors are very narrow.

Policies:

Refurbishment & alteration

Any opportunity to improve the internal insulation of the external walls or floors/ceilings should be exploited. (2.4, 5.6, 6.9)

Suffolk Walk

Assessment: East elevation: Significant

West elevation: Some significance

Observations:

Built between 1965 and 1967. Staff accommodation.

The long pitched roofs are uncharacteristic of Lasdun's work.

Heavy timber sliding widows, similar to those originally used on the ziggurats, are still in place.

The outlook would be very different if the construction of ziggurats had continued to the south-east of Suffolk Terrace, as Lasdun intended.



The south-east elevation of Suffolk Walk. Beyond Suffolk Walk are the Careers Centre (former squash courts) and the Music Centre. Nelson Court is visible in the background.

Careers Centre (former squash court)

Assessment: No significance

Observations:

This building was built between 1965 and 1967 with two levels of squash courts.

It has been converted to provide four levels for the Careers Centre. Windows inserted in what were originally blank walls – the orange colour is unfortunate. Alterations to blockwork highly visible due to differences in weathering and/or block colour.

The entrance feature at walkway level which is prominent and incongruous.

Policies:

Refurbishment & alteration

Any opportunity to improve the internal insulation of the external walls or floors/ceilings should be exploited. (2.4, 5.6, 6.9)

Prospective improvements

When practicable and affordable, the exterior of the Careers Centre should be refurbished, or it could be replaced with a higher quality building making better use of an important site on the campus. (2.5, 4.1, 6.8)



Boiler House, Stores, etc.

Assessment:

Chimney flues: Significant

Other buildings: No significance

Observations:

These buildings were built between 1965 and 1966.

The twin boiler flues have been painted. Other examples of paired vertical accents are found in Lasdun's work; however, two more flues were anticipated, forming a square on plan with the existing flues.

Models of the masterplan show that the flues are located on the centreline of the Teaching Wall and harbour, but this is not evident on the ground.

Policies:

Prospective improvements

When practicable and affordable, these buildings, with the exception of the flues, could be replaced with higher quality buildings making better use of the site. (2.5, 4.1, 6.8)



The Boiler House and associated buildings.

Other buildings on UEA campus

East of the Teaching Wall

Central area buildings

- Assessment:**
- Restaurant – No Significance
 - Chaplaincy – Some Significance
 - Council House – Significant
 - Registry – Some Significance
 - Union House – Some Significance
 - Shops and Offices above – No Significance
 - Congregation Hall (old sports hall) – No Significance
 - Drama Studio – Some Significance

Observations:

Most of these buildings were built when Bernard Feilden was consultant architect, after Denys Lasdun had withdrawn from UEA in 1968.

Restaurant and Chaplaincy were by Feilden & Mawson between 1969 and 1971. Concrete blockwork echoing the construction of Lasdun's Computer Centre. Substantial changes to the Restaurant building in 2004.



The Square, with the Restaurant (left) and Chaplaincy (right).

Union House, Shops and Offices and Congregation Hall (old sports hall) were designed by Johns Slater & Haward between 1970 and 1973. Union House has precast concrete external wall echoing the Library; the other buildings are blockwork. There have been many changes, and further changes are on-going.

The Drama Studio was designed by Rick Mather Architects between 1992 and 1994, masking the blank south wall of Congregation Hall.

The Registry and Council House were designed by Feilden & Mawson and completed in 1975, around an existing grove of Spanish chestnuts. Concrete blockwork elevations. Original joinery in the Council Room has been replaced.

The Registry tower was designed as a landmark at the entrance to UEA.

Policies:

Prospective improvements

When practicable and affordable, Congregation Hall could be replaced with a higher quality building making better use of an important site on the campus. (2.1, 2.5, 4.1, 4.4)



Registry.



Walkway-level deck over shops, with new glazed link to Union House on right.



Congregation Hall (former sports hall).



Drama Studio with Nelson Court in the background.

Buildings by Foster & Partners

Sainsbury Centre

Assessment: Very High Significance

Observations:

The Sainsbury Centre was designed by Foster Associates from 1974 and was completed in 1978. It was re-clad in 1988. It will become eligible for listing in 2008 under the 30-year rule, but could be listed earlier if there is a perceived threat to its integrity.

Most accommodation in an open, single-level space with two mezzanines. Storage in the basement, and a lecture room which was fitted out shortly after the building was opened.

The glazed façade toward the Broad is almost permanently screened to protect works of art from excessive daylight, blocking what would otherwise be an important view.

A refurbishment programme, to replace the servicing systems and improve the connection with the Crescent Wing, began in 2004; completion in 2006.

Policies:

Maintenance & management

Some way of reinstating the view to the Broad whilst protecting works of art should be sought. (2.3, 5.6)

Crescent Wing

Assessment: High Significance

Observations:

The Crescent Wing is an extension designed by Foster & Partners and built between 1989 and 1991, providing storage and workshops, offices and a government indemnity standard exhibition space.



View to the Broad with the Sainsbury Centre on the right and the ramp down to the Crescent Wing in the centre. The Crescent Wing is under the grass roof, directly in front of the Sainsbury Centre.

Music Centre

Assessment: Significant

Observations:

Designed by Arup Associates between 1971 and 1973. Their recently completed design for the new concert hall at the Snape Maltings was extremely well known at this time.

There has been very little change since the Music Centre was built, but refurbishment will become necessary in the next few years.

The pitched roof echoes Suffolk Walk.

The outlook from the ground floor teaching rooms and offices is pleasant. There are very few ground level teaching rooms in the original UEA complex.

Policies:

Prospective improvements

When the Music Centre is refurbished, the work should be carried out to a high standard that maintains the character and significance of the building. (2.1, 2.5, 5.7)



The Music Centre by Arup Associates, of Snape Maltings concert hall fame.

Northern part of the Campus

Buildings related to Chancellors Drive

Assessment: Health Centre (former) – No significance
Maintenance Building – No significance
Education and Computing Sciences– Some significance
Climatic Research Unit – Significant
Constable Terrace – Significant
The Queen’s Building – Some significance
Elizabeth Fry Building – Some significance
School of Medicine, Health Policy and Practice – Some significance
ZICER – Some significance
Biophysical Chemistry – Some significance
The Lodge – No significance
SportsPark – Some significance

Observations:

The early buildings date from Bernard Feilden’s period as consultant architect. The later buildings relate to Rick Mather Architects’ masterplan of 1989.

The Health Centre was designed by Feilden & Mawson between 1972 and 1976. Concrete blockwork.

The Maintenance Building was designed by Edward Skipper between 1976 and 1977. Concrete blockwork. Infill between earlier Lasdun buildings.

The buildings for Education, Information Systems and Climatic Research were designed by Rick Mather Architects between 1982 and 1984. Glazed blockwork elevations, to avoid the staining associated with concrete cladding. The tiles seem to be discolouring where exposed to the weather.



The blue windows and tiled north elevation of Mather’s Education and Computing Sciences buildings.

Constable Terrace was designed by Rick Mather Architects between 1992 and 1993. White render over external insulation. Elegantly detailed external spiral staircase.

The early Mather buildings, particularly Climatic Research, are good examples of 1980s post-modernism.

The Queen's and Elizabeth Fry buildings were designed by John Miller & Partners between 1992 and 1995. Thick cavity walls with very high insulation standard.

The buildings for the the School of Medicine, Health Policy and Practice and the Zuckerman Institute for Connective Environmental Research (ZICER) were designed by RMJM. White render over external insulation. ZICER has rooftop glazing with photo-voltaic cells.

Biophysical Chemistry was designed by RH Partnership and built in 2001-02. Blue render.

The Lodge was designed by Feilden & Mawson between 1972 and 1976. Concrete blockwork.

The SportsPark was designed by RH Partnership and opened in 2000. Prominent landmark on the main entrance road to the Campus.

An extension to the School of Biological Sciences has been designed by RH Partnership – due for completion in 2005.



The Climatic Research Centre was designed as a landmark at the beginning of Chancellor's drive.



Constable Terrace.



The Queen's Building.



Elizabeth Fry Building.



Biophysical Chemistry in the foreground.



The ZICER building.



The School of Medicine, Health Policy and Practice.

Policies:

Prospective improvements

New buildings in the north-west part of the campus should be of a quality that is at least equal to the standard established by recently completed buildings in this part of the campus. (2.1, 2.5, 4.4)

Eastern part of the Campus

Buildings in the East part of the Campus

Assessment: Orwell Close – No significance
 Wolfson Close – No significance
 Nelson Court – Some significance
 Colman House – Some significance



Observations:

The former Waveney Terrace I/II was designed by Norwich Partnership (F&M as consultants) between 1969 and 1972.

Orwell Close and Wolfson Close were designed by Anthony Falkner between 1978 and 1980. Jaunty concrete blockwork and monopitch roofs.

Nelson Court was designed by Rick Mather Architects between 1991 and 1993. It is sited alongside the old sports hall on land that had been levelled for sports pitches.

Colman House was designed by LSI Architects and completed in 2004. The service towers have projecting cornices, in contrast to Lasdun's sheer tower profiles. This building is seen on the skyline in views from the Broad.

Policies:

Prospective improvements

When practicable and affordable, Orwell Close and Wolfson Close could be radically refurbished, or replaced with higher quality buildings making better use of the site. (2.5, 4.1, 4.4)

New buildings in the north-east part of the campus should be of a quality that is at least equal to the standard established by recently completed buildings in this part of the campus. (2.1, 2.5, 4.4)



Orwell Close and Wolfson Close.



Colman House.



Nelson Court.

Landscape

Landscape between the Yare and the UEA buildings

Assessment: Very high significance

Observations:

This includes all the land to the north of the River Yare, excluding the built-up part of the campus.

Lasdun and Colvin's landscape vision for UEA was the creation of a parkland landscape along the River Yare, overlooked by the new University buildings. This was substantially but not fully achieved, and little has been done to the landscape to enhance this vision.

The view across the Broad to the ziggurats is UEA's defining image.

Lasdun and Colvin anticipated that the land to the east of the present Suffolk Terrace would be developed, with additional ziggurats reaching down to the new lake. At present there is no visual termination at the east of the Campus, to balance the Sainsbury Centre at the west (see pp.7 and 28).

The steepness of the verge to the Broad limits the visual impact of the water when viewed from the adjoining meadow.

Denys Lasdun intended that the 'harbour' between Norfolk and Suffolk Terraces should be a point of interchange between the buildings and the landscape, but at present it is not a centre of activity and lacks visual impact.

Policies:

Maintenance & management

Existing plantings and landscape features should be managed in accordance with a new landscape strategy. (2.3, 6.1, 6.2)

Refurbishment & alteration

The margin of the Broad should be altered to create a more gradual slope. (2.4, 5.1)

Prospective improvements

Modifications to the landscape should be carried out in accordance with a new landscape strategy to enhance the parkland character of the landscape, taking account of changes within and outside the Campus boundary. (2.5, 5.1, 5.2)

When practical and affordable, new development of the highest quality should be considered to the east of Suffolk Terrace, as anticipated in Lasdun and Colvin's campus plan. (2.5, 4.1, 4.2)

Landscape in developed area of campus

Assessment: Significant

Observations:

Lasdun and Colvin envisaged that the space between buildings would be treated primarily with hard landscaping. Colvin proposed some planting between the ziggurats and the Teaching Wall, and suggested that there could be climbers on some buildings. Lasdun and Colvin opposed 'suburbanisation' of the Campus.

The central Square is a successful open space at the centre of the University, even though it is enclosed by buildings that are not outstanding. Designed by Feilden & Mawson, the Square relates well to Lasdun's walkway system, but not to the 'harbour'.

The landscape along Chancellor's Drive is visually cut off from the Yare valley and has a different landscape character. It lacks the impact and significance of the Lasdun/Colvin vision.

The main Campus entrance is visually chaotic. The Registry tower was intended to be a landmark, but trees now obscure it from the entrance road.

The quality of the Campus is degraded by carparking and service vehicles.

Union Place was originally the bus stop for the University and a major pedestrian access route passes through it, but it now acts as an unsightly service yard for Union House.



Location of undeveloped land to the east of Suffolk Terrace, which had been intended for development in Lasdun and Colvin's campus plan.



Planting from the 1970s is now mature and a new landscape vision is needed.

The East Campus Development Plan proposes radical changes. Building work is in progress.

Policies:

Refurbishment & alteration

Existing plantings and landscape features should be managed in accordance with a new landscape strategy. (2.3, 6.1, 6.2)

‘Suburban’ features in between the Lasdun buildings should be removed. (2.3, 6.2, 6.8)

Prospective improvements

When practical and affordable, the visual quality of Campus entrance should be improved by changes to the buildings and landscape, in accordance with a new landscape strategy. (2.5, 4.4, 5.1, 6.8)

South and west of the River Yare

Assessment: High significance

Observations:

The walk along the River Yare through the University estate is attractive and well-used. It is managed in cooperation with the local authorities. The river is well wooded for most of its length, making the river an enclosed world, especially in the summer. There are open and important views to the main buildings of UEA at the Broad. There is little screening to the University sports pitches.

New buildings for the John Innes Research Centre and Norwich and Norfolk Hospital, which are located just to the west of the campus boundary, are visible on the skyline when viewed from the University, weakening the impression of an open setting that was intended by Lasdun and Colvin.

New woodland has been planted opposite the Broad and will require on-going management.

These areas provide a wide variety of ecological habitats.

A utilitarian sports pavilion is accessed from Colney Lane.



The River Yare in summer.

There is an arched footbridge over the Yare at the west end of the Broad, and a utilitarian concrete bridge to the playing fields that is used by maintenance vehicles.

The possibility of a road connection across the Yare has been put forward a number of times. Currently the idea of a bus link between UEA and the new hospital and research facilities to the south and west of the University is under consideration.

Policies:

Maintenance & management

Plantings and woodlands should be managed in accordance with a new landscape strategy. (2.3, 6.1, 6.2)

The planting screen between the Yare and the playing fields should be reinforced in accordance with a new landscape strategy. (2.3, 5.1)

New planting to screen the buildings of the John Innes Research Centre and Norwich and Norfolk Hospital should be considered (2.3, 5.1).

A study of the current state of the ecology in this area should be carried out. (2.3, 3)

Impact assessment

The Conservation Development Strategy should have many uses in the on-going management at UEA. One use is impact assessment, that is, the evaluation of proposals for change. This section presents a procedure for impact assessment which will, it is hoped, add to the usefulness of the Strategy.

It is essential that the Conservation Development Strategy is applied as a whole. A proposal for change may be affected by a number of Principles and Policies, and all of them should be taken into account when assessing the impact of the change. If the Conservation Development Strategy is applied selectively, there is a risk of drawing invalid conclusions.

The procedure is based on the Principles set out above. All relevant criteria for conservation management should be covered by the Principles, so it should not be necessary to introduce additional factors when carrying out impact assessment. If it turns out that additional criteria have to be considered, there is probably a need for new or amended Principles or Policies.

Structure for impact assessment

The impact assessment procedure has four components, described below, which would normally be presented in a report. The four-part structure should be suitable for assessing proposals of any scale, but the level of detail would vary depending on scale and importance – the length of an impact assessment could vary from a page or two to a short report.

A Key data

This is a list of the basic data for the impact assessment:

A1 Identify the proposed work;

A2 Identify the elements of the building that are affected, and the level of significance attached to them in Section 3 of the Conservation Development Strategy;

A3 Identify the Principles in Section 3 of the Conservation Development Strategy that have a bearing on the proposed work;

A4 Identify Policies that are relevant to the work, if any.

B Description of the proposal

This can be in words or drawings, in sufficient detail for the evaluation to be carried out. The reasons for the proposed change should also be stated.

C Evaluation

For each element that is affected (A2), consider each of the relevant Principles (A3) and Policies (A4), and state whether the proposal is consistent with the Principles and Policies. Often the evaluation will go beyond a simple, factual exercise: judgement may be required, and in such cases the basis for the evaluation should be set out clearly.

D Conclusion

The conclusion establishes whether, having reviewed each element for each Principle and Policy, the proposal is or is not consistent with the Conservation Development Strategy. If the proposal is consistent for every element and relevant Principle and Policy, it should normally be acceptable from conservation point of view; whereas if it is inconsistent for one or more of the elements and Principles or Policies it may not be acceptable.

SECTION 4

SOURCES OF INFORMATION

This section lists the main sources of information about the buildings and landscape of UEA. The statutory listing statements are included.

Sources of information

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- Materials in the possession of former Lasdun associates and employees

Statutory listing statements

Four parts of the UEA campus were listed in 2003:

Suffolk Terrace (the four eastern ziggurats) – Grade II*

Norfolk Terrace (the six western ziggurats) – Grade II*

Teaching Wall – Grade II

Library – Grade II.

The associated walkways were also listed. The listing statements are given verbatim below.

Suffolk Terrace

1188/3/10104

EARLHAM ROAD (South, off)

Suffolk Terrace and adjoining walkway and stairs to rear, at the University of East Anglia

GV II*

Four linked blocks of student accommodation, with facilities for resident tutors. 1964-8 by Denys Lasdun and Partners, commissioned in 1962 to produce a master plan for the new University of East Anglia.

Cross wall concrete construction with precast panels made on site, 10" thick externally, with 6" loadbearing crosswalls within. Internal joints recessed, external joints with neoprene baffle and damp proof backing. Siporex precast concrete roof units. Seven storeys and service tower, though sloping site means that no part of the building is more than five storeys at any one point. The stepped section and the continuous profile with each block at 90° to the next gives the terrace its more common name of ziggurat. Each block itself with a 90° corner ending in a concrete gargoyles. Each block has a flat on each floor for up to twelve students, with ten single rooms and (in the concave angle) one shared unit, and a shared kitchen in the projecting corner. Bathrooms and storage areas at the rear. Smaller flats at top of each block for graduates and resident tutors. Each floor is set back behind the one below, and lowered so that the roof level of the lower flat is

the sill level of that above. The consequent reduction in ceiling heights in the rear part of the block makes for a shorter access stair, with twelve steps between each floor. Internal staircases at centre of each block lead from each flat to rear walkway at level of uppermost flat (though only third floor at rear) over bicycle and car parking area. Escape stairs, dog-leg and of shuttered concrete, at each end of the range (*sic* – there is no stair at the eastern end). Continuous timber windows to south, each in two halves with horizontal sliding section. They form an important part of the striking composition of stepped-back vertical and repetitive horizontal grid. The interiors of the students' units with fitted cupboards to the rear of each room.

The University of East Anglia was founded in 1960, and Lasdun was commissioned as consultant architect in April 1962. The site was 165 acres of parkland on the edge of Norwich, used by the local authority as a golf course and flanked by the River Yare, dammed to form a lake (or broad) in c.1977 (*sic* – the Broad was formed by excavation beside the River Yare). Lasdun was determined to preserve the flat, marshy and very open valley landscape and the line of ziggurats placed where the valley begins to rise is part of this. In 1960 Chamberlin, Powell and Bon had conceived the 'ten minute university' where departments and student accommodation was to be concentrated on a compact site. UEA and Leeds both adopted the principle of the continuous teaching block, something developed almost concurrently, but independently, in North America and particularly Canada. Lasdun's nascent scheme, published in May 1963, intended a development of up to 6,000 people over fifteen years, and shows the form of the ziggurats and long spinal teaching block in a form clearly recognisable though more complex and extensive than that built. The accommodation of the students greater freedom within a 'family unit' of their peers. The stepped form owes something to Sant'Elia's drawings for 'Casa a gradinate', and to Marcel Breuer's 1928 scheme for a hospital at Elberfeld, which had a stepped section and an upper gallery for rear access. The expression of the services as rooftop sculpture reflects Lasdun's awareness of Louis Kahn's Richards Medical Laboratories at the University of Pennsylvania, as well as earlier projects of his own. His scheme for Churchill College, Cambridge (1960), had already used similar terraces, as did his built scheme at Christ's College and proposals for the Cripps Building at St John's (both Cambridge 1962). There, too and at Leicester, Sir Leslie Martin had already been experimenting with stepped terraces. UEA was Britain's first and most successful expression of a university as a small city rather than a dispersed campus, and William Curtis suggests that it was influential internationally, particularly on Giancarlo de Carlo, and Josic Candilis and Woods, members of Team 10 who shared Lasdun's interest in clustered communities.

'The powerful sculptural forms of the Lasdun UEA make the university proud to find itself on the international circuit. The buildings themselves, however, should be seen not only as form-making and an intellectualised counterpart between the building mass and the landscape; they

give lessons in consistent detail throughout a wide-ranging building programme and illustrate a single-minded effort to ensure high quality maintenance-free exteriors and internal elements within permitted cost levels (*Architects' Journal*, 14 June 1972, p.1334). Of all the new universities of the 1960s the architecture of UEA 'has most consciously created a visual impression of experiment and enquiry, yet without the use of bizarre forms of materials, and notably without recourse to any academic architecture' (Tony Birks and Michael Holford, *Building the New Universities*, 1972, p.73). 'Why one likes Lasdun's East Anglia student clusters is that they have a front and a back and a counter-part space – that it is a unitary living idea, harnessing repetition' (Peter Smithson).

SOURCES

Arup Journal, March 1968, pp.36-41

Peter Smithson, 'Simple thoughts on repetition', *Architectural Design*, August 1971, pp.479-81.

Architects' Journal, 14 June 1972, 1322-38

Tony Birks and Michael Holford, *Building the New Universities*, Newton Abbot, 1972, pp.73-83.

Denys Lasdun and Partners, *A Language and a Theme*, London, 1976.

Diane Kay, *University Architecture in Britain 1950-75*, unpublished PhD thesis, Oxford, 1987, p. 184.

William J. R. Curtis, *Denys Lasdun*, London, 1994, 87-101.

Stefan Muthesius, *The Postwar University, Utopianist Campus and College*, London, Paul Mellon Centre/Yale University Press, 2001 pp. 138-149.

Stefan Muthesius, *Concrete and Open Skies*, The University of East Anglia (*sic*), 2001.

Norfolk Terrace

1188/3/10104

EARLHAM ROAD (South, off)

Norfolk Terrace and adjoining walkway and stairs to rear, at the University of East Anglia

GV II*

Six linked blocks of student accommodation, with facilities for resident tutors. 1964-8 by Denys Lasdun and Partners, commissioned in 1962 to produce a master plan for the new University of East Anglia.

Cross wall concrete construction with precast panels made on site, 10" thick externally, with 6" loadbearing crosswalls within. Internal joints recessed, external joints with neoprene baffle and damp proof backing. Siporex precast concrete roof units. Seven storeys and service tower, though sloping site means that no part of the building is more than five storeys at any one point. The stepped section and the continuous profile with each block at 90° to the next gives the terrace its more common name of ziggurat. Each block itself with a 90° corner ending in a concrete gargoyle. Each block has a flat on each floor for up to twelve students, with ten single rooms and (in the concave angle) one shared unit, and a shared kitchen in the projecting corner. Bathrooms and storage areas at the rear. Smaller flats at top of each block for graduates and resident tutors. Each floor is set back behind the one below, and lowered so that the roof level of the lower flat is the sill level of that above. The consequent reduction in ceiling heights in the rear part of the block makes for a shorter access stair, with twelve steps between each floor. Internal staircases at centre of each block lead from each flat to rear walkway at level of uppermost flat (though only third floor at rear) over bicycle and car parking area. Escape stairs, dog-leg and of shuttered concrete, at each end of the range (*sic* – there is no stair at the western end). Continuous timber windows to south, each in two halves with horizontal sliding section. They form an important part of the striking composition of stepped-back vertical and repetitive horizontal grid. The interiors of the students' units with fitted cupboards to the rear of each room.

The University of East Anglia was founded in 1960, and Lasdun was commissioned as consultant architect in April 1962. The site was 165 acres of parkland on the edge of Norwich, used by the local authority as a golf course and flanked by the River Yare, dammed to form a lake (or broad) in c.1977 (*sic* – the Broad was formed by excavation beside the River Yare). Lasdun was determined to preserve the flat, marshy and very open valley landscape and the line of ziggurats placed where the valley begins to rise is part of this. In 1960 Chamberlin, Powell and Bon had conceived the 'ten minute university' where departments and student accommodation was to be concentrated on a compact site. UEA and Leeds both adopted the principle of the continuous teach block, something developed almost concurrently, but independently, in North America (especially in Canada). Lasdun's nascent scheme, published in May 1963, intended a development of up to 6,000 people over fifteen years, and shows the form of the ziggurats and long spinal teaching block in a form clearly recognisable though more complex and extensive than that built. The accommodation of the students greater freedom within a 'family unit' of their peers. The stepped form owes something to Sant'Elia's drawings for 'Casa a gradinate', and to Marcel Breuer's 1928 scheme for a hospital at Elberfeld, which had a stepped section and an upper gallery for rear access. The expression of the services as rooftop sculpture reflects Lasdun's awareness of Louis Kahn's Richards Medical Laboratories at the University of Pennsylvania, as well as earlier projects of his own. His scheme for Churchill College, Cambridge (1960), had already used

similar terraces, as did his built scheme at Christ's College and proposals for the Cripps Building at St John's (both Cambridge 1962). There, too and at Leicester, Sir Leslie Martin had already been experimenting with stepped terraces. UEA was Britain's first and most successful expression of a university as a small city rather than a dispersed campus, and William Curtis suggests that it was influential internationally, particularly on Giancarlo de Carlo, and Josic Candilis and Woods, members of Team 10 who shared Lasdun's interest in clustered communities.

'The powerful sculptural forms of the Lasdun UEA make the university proud to find itself on the international circuit. The buildings themselves, however, should be seen not only as form-making and an intellectualised counterpart between the building mass and the landscape; they give lessons in consistent detail throughout a wide-ranging building programme and illustrate a single-minded effort to ensure high quality maintenance-free exteriors and internal elements within permitted cost levels (*Architects' Journal*, 14 June 1972, p.1334). Of all the new universities of the 1960s the architecture of UEA 'has most consciously created a visual impression of experiment and enquiry, yet without the use of bizarre forms of materials, and notably without recourse to any academic architecture' (Tony Birks and Michael Holford, *Building the New Universities*, 1972, p.73). 'Why one likes Lasdun's East Anglia student clusters is that they have a front and a back and a counter-part space – that it is a unitary living idea, harnessing repetition' (Peter Smithson, p481).

SOURCES

Arup Journal, March 1968, pp.36-41

Peter Smithson, 'Simple thoughts on repetition', *Architectural Design*, August 1971, pp.479-81.

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Tony Birks and Michael Holford, *Building the New Universities*, Newton Abbot, 1972, pp.73-83.

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Stefan Muthesius, *The Postwar University, Utopianist Campus and College*, London, Paul Mellon Centre/Yale University Press, 2001 pp. 138-149.

Stefan Muthesius, *Concrete and Open Skies*, The University of East Anglia (*sic*), 2001.

Teaching Wall

1188/3/10105

EARLHAM ROAD (South, off)

Teaching Wall and raised concourse, with attached walkways, at the University of East Anglia

GV II

Staggered spinal block of teaching accommodation. 1964-8 by Denys Lasdun and Partners; commissioned in 1962 to produce a master plan for the new University of East Anglia; completed 1968-70 by Feilden and Mawson.

Cross wall concrete construction with precast panels made on site, 10" thick externally, with 6" loadbearing crosswalls within. There are four large basic components, which were manufactured in Norwich and assembled on site with some in situ specials. The panels are 2'7" to produce a 21' overall grid. Internal joints recessed, external joints with neoprene baffle and damp proof backing. This was determined to obtain the maximum repetition of units and flexibility in the use of the building, with the same system used for arts and science subjects. The central section built of concrete frame construction, clad in concrete block. Siporex precast concrete roof units. Five storeys and service towers. Linked by in situ concrete walkway at second-floor level that joins on that to Norfolk and Suffolk Terraces (q.v.) Service entrances from roadway at ground level. Anodised aluminum windows designed to be resistant to chemical action, and containing vertical sliding sash units with glass slid directly against the frame. The areas for Chemical Sciences, Biological Services and Arts were built to Lasdun's specifications; the infill sections to a simplified system by Bernard Feilden. Interiors not of special interest as designed for rapid, easy change. Walkway of reinforced concrete with precast balustrading. Spiral stairs link it to ground level; similar concrete spiral staircases serve as fire escapes on the main spine building, particularly at the end (biological sciences) where the walkway is furthest from ground level.

The University of East Anglia was founded in 1960, and Lasdun was commissioned as consultant architect in April 1962. The site was 165 acres of parkland on the edge of Norwich, used by the local authority as a golf course and flanked by the River Yare, dammed to form a lake (or broad) in c.1977 (*sic* – the Broad was formed by excavation beside the River Yare). Lasdun was determined to preserve the flat, marshy and very open valley landscape and the line of ziggurats placed where the valley begins to rise is part of this. The spine was conceived in close relation to this, just like the relationship between the infant and junior wings at Hallfield School had done on a very much smaller scale in 1953-5 (City of Westminster, grade II). This is a version that shows Lasdun's mature style at its finest. In 1960 Chamberlin, Powell and Bon had conceived the

‘ten minute university’ where departments and student accommodation was to be concentrated on a compact site. UEA and Leeds both adopted the principle of the continuous teach block, something developed almost concurrently, but independently, in North America (especially Canadian) models. Lasdun’s nascent scheme, published in May 1963, intended a development of up to 6,000 people over fifteen years, and shows the form of the ziggurats and long spinal teaching block in a form clearly recognisable though more complex and extensive than that built. The accommodation was designed to bring all the teaching together, representative of the belief of the Vice Chancellor, Frank Thistlethwaite, and the Academic Planning Board, that the most productive areas of research were at the boundaries between subjects, and that much was to be gained by study in ‘schools’ of related subjects.

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SOURCES

Arup Journal, March 1968, pp.36-41

Frank Thistlethwaite, ‘The University of East Anglia’, in Murray G Ross, *New Universities in the Modern World*, London and New York, Macmillan/St Martin’s Press, pp.53-68

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Library

1188/3/10106

EARLHAM ROAD (South, off)

Library and attached stairs to grounds, at the University of East Anglia

GV II

University Library. Built in two phases, 1968 and 1972, to the designs of Denys Lasdun and Partners, commissioned in 1962 to produce a master plan for the new University of East Anglia, and completed by Bernard Feilden and David Luckhurst. In situ 12" thick reinforced concrete slabs spanning both ways supported on 20" by 20" columns spaced at 22'6" centres. Increased loads at the perimeter are supported on a system of factory-made precast concrete walls 6'6" deep and 8" thick which serve also as natural light diffusers. External precast spandrel panels 11'3" long interlock with the structural columns. Flat roof with service and lift towers. Six floors with pedestrian entry off the university walkway at second floor level. Two floors of reading and stack are positioned above the entrance and administration floors and two floors of reading and stack below. The services, lifts and stairs rise within an internal vertical core - the rest of the space left as flexible as possible.

Aluminum anodized frames, vertically pivoted. Pre cast concrete transoms acting as photobolic reflectors span over windows at 7' above floor level. The enclosure of space by these walls and the wide concrete transoms spanning between them provides an intimate scale at the perimeter; their absence from the set-back administrative floor over the entrance gives the building its modulation while giving emphasis to the entrance floor and walkway, which continues as a 'gallery' round two sides of the building. Top ventilation windows are set back to the inner edge of the transom. Spiral staircases from second-floor (entrance floor) walkway to ground in corner. The connecting section of the walkway, and attached buildings, that link the library with the spine and Norfolk and Suffolk Terraces are not included.

The building was designed to be built in two phases to hold nearly 500,000 books and seat 1,000 readers. Interior with stacks, fluorescent light fixings, and seating in bright colours set close to the windows. Concrete stairs in unpainted concrete well at the junction between the two phases.

The University of East Anglia was founded in 1960, and Lasdun was commissioned as consultant architect in April 1962. The site was 165 acres of parkland on the edge of Norwich, used by the local authority as a golf course and flanked by the River Yare, dammed to form a lake (or broad) in c.1977 (*sic* - the Broad was formed by excavation beside the River Yare). Lasdun was

determined to preserve the flat, marshy and very open valley landscape and the line of ziggurats placed where the valley begins to rise is part of this. The library was the university's first 'signature' building, placed at the centre of the site in a greensward or 'harbour' created by Lasdun as the centrepiece of his campus.

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SECTION 5

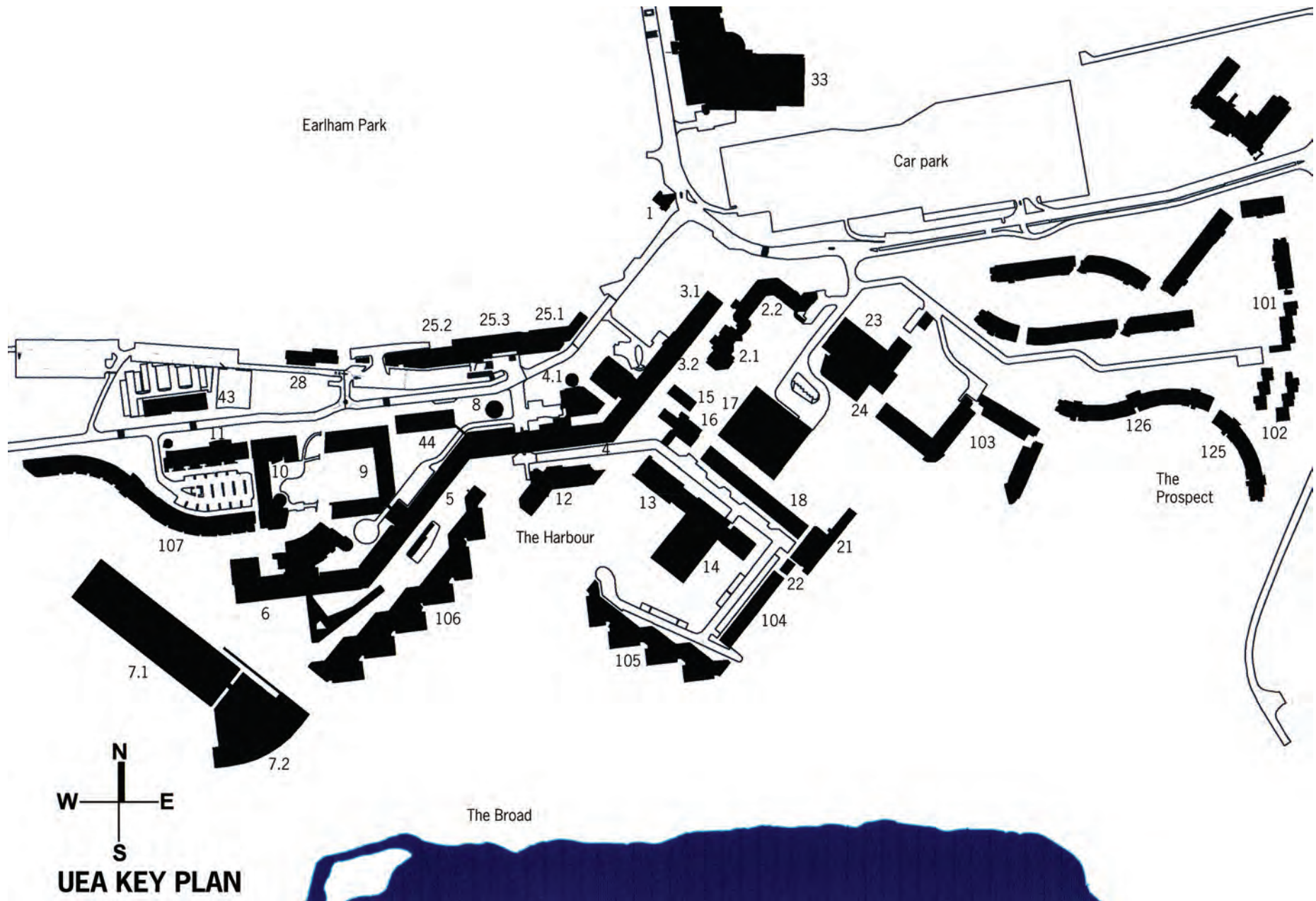
PLANS

This section contains the following plans of the UEA site and buildings: key plan, site plan, chronological plans for 1969, 1974, 1982, 1995 and 2004, plans showing listing and significance of the buildings, and a plan showing the locations of potential development opportunities on the site.

Key plan

The buildings evaluated in the Conservation Development Strategy are numbered with their UEA codes. Buildings completed after 2004 were not included in the evaluation. Page references to the buildings' entries in Section 3 are also given.

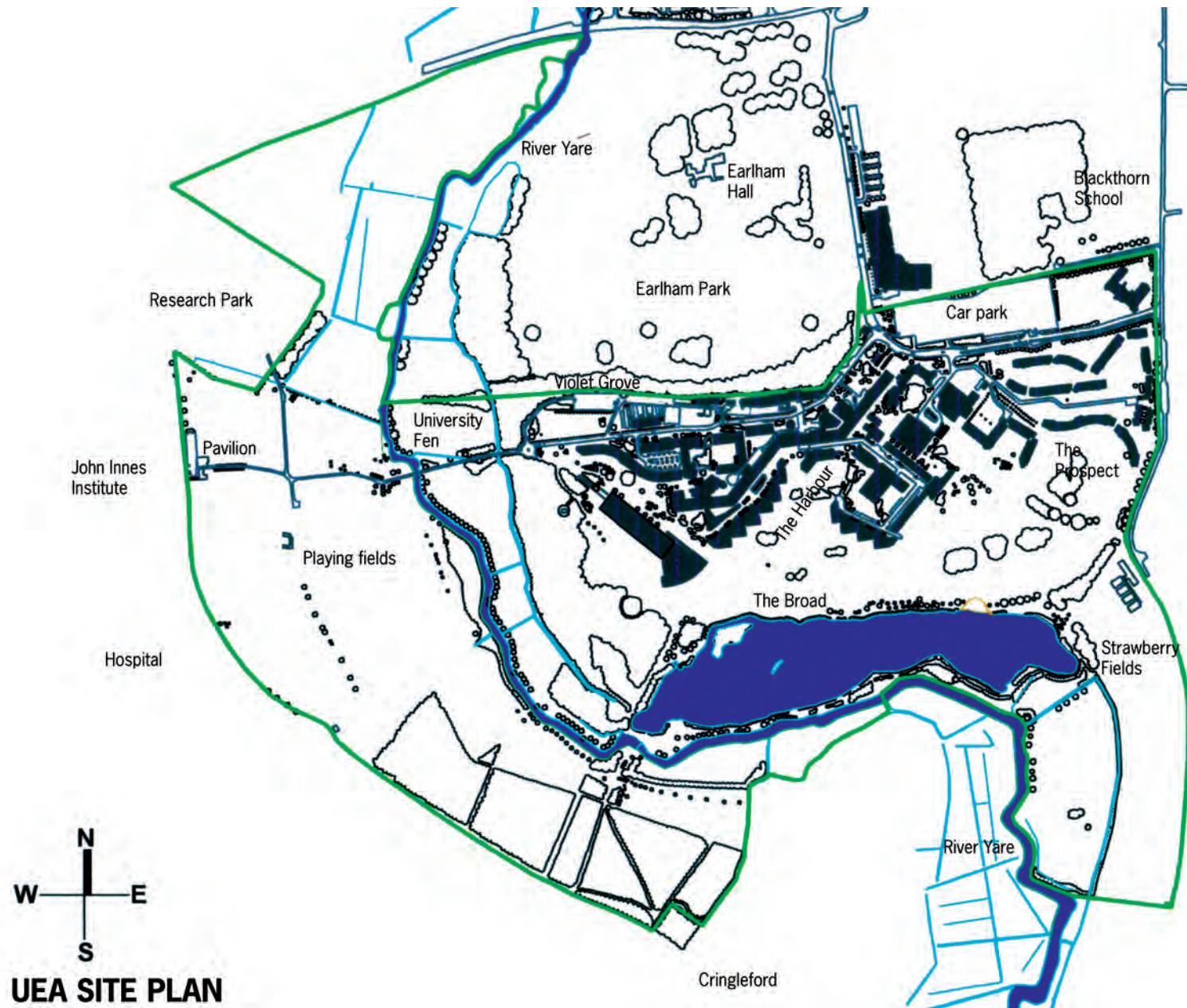
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2.1	Council House (p.94)	22	Careers Centre (p.92)
2.2	Registry (p.94)	23	Congregation Hall (old sports hall) (p.94)
3.1	Teaching Wall: Arts II (p.78)	24	Drama Studio (p.94)
3.2	Teaching Wall: Arts I (p.78)	25	Boiler House, etc (p.93)
4	Teaching Wall: Chemical Sciences and Pharmacology (p.78)	28	Health Centre (former) (p.98)
4.1	Biophysical Chemistry (p.98)	33	SportsPark (p.98)
5	Teaching Wall: Environmental Sciences (p.78)	43	School of Medicine, Health Policy and Practice (p.98)
6	Teaching Wall: Biological Sciences (p.78)	44	Zuckerman Institute for Connective Environmental Research (ZICER) (p.98)
7.1	Sainsbury Centre for the Visual Arts (p.97)	101	Orwell Close (p.100)
7.2	Crescent Wing (p.97)	102	Wolfson Close (p.100)
8	Climatic Research Unit (p.98)	103	Nelson Court (p.100)
9	Education and Computing Sciences (p.98)	104	Suffolk Walk (p.91)
10	The Queen's Building (p.98)	105	Suffolk Terrace (p.67)
11	Elizabeth Fry Building (p.98)	106	Norfolk Terrace (p.67)
12	Computing Centre (p.90)	107	Constable Terrace (p.98)
13	Lecture Theatres (p.89)	125/126	Colman House (p.100)
14	Library (p.86)		
15	Chaplaincy (p.94)		
16	Restaurant (p.94)		
17	Union House (p.94)		
18	Shops with offices above (Street) (p.94)		



Site plan

The site plan shows UEA's overall land holding on the main campus, with the boundary line in green. It does not include the University Village.

Compare with the proposal in Lasdun's Development Plan Draft II of September 1963 (see p.7).



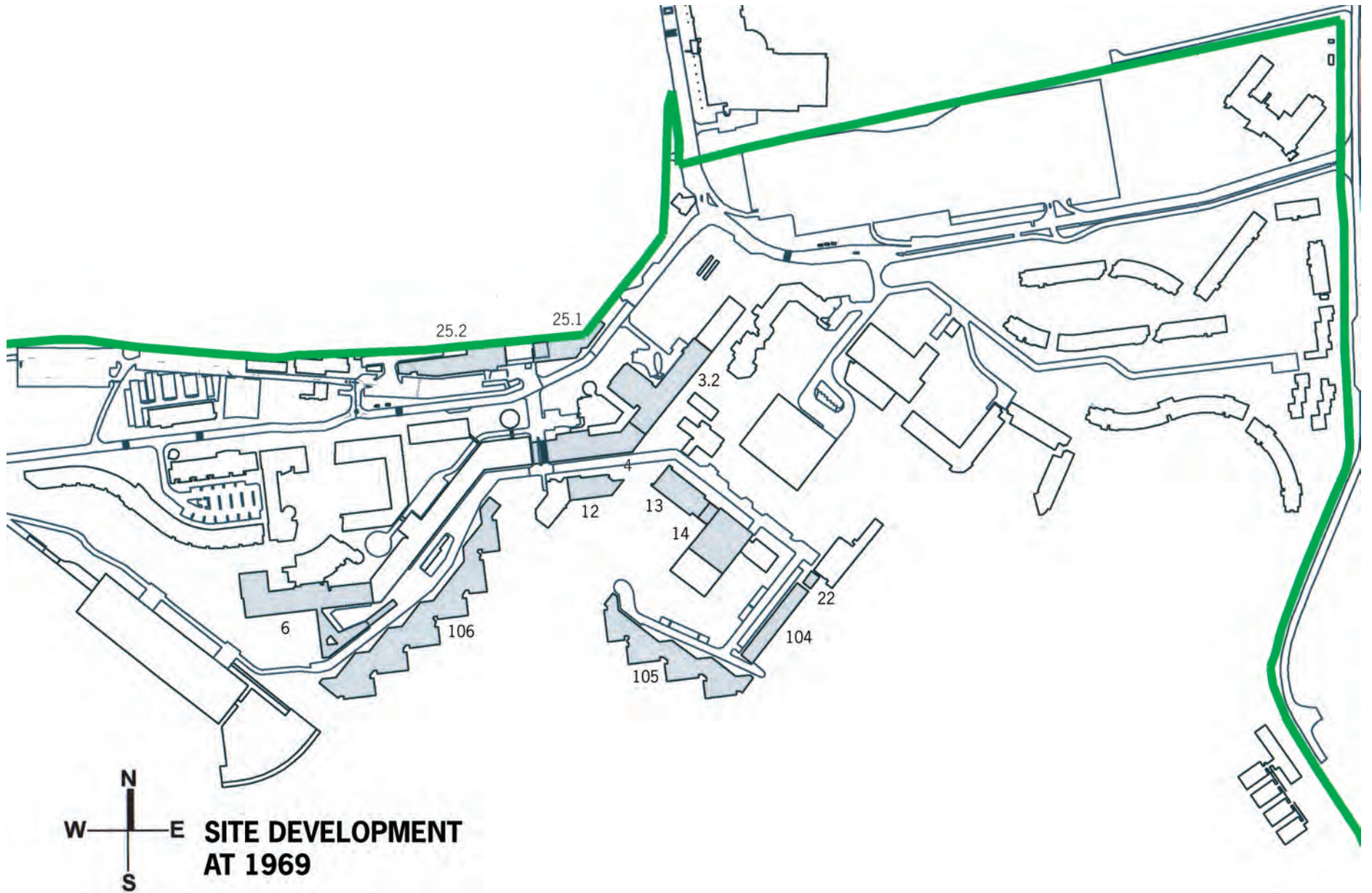
UEA SITE PLAN

Chronological plan: 1969

The buildings completed by 1969 were:

	Name	Date	Architect
3.2	Teaching Wall: Arts I	1965-67	Denys Lasdun & Partners
4	Teaching Wall: Chemical Sciences and Pharmacology	1964-66	Denys Lasdun & Partners
6	Teaching Wall: Biological Sciences	1965-67	Denys Lasdun & Partners
12	Computing Centre Phase 1 (east)	1967-68	Denys Lasdun & Partners
13	Lecture Theatres	1967-69	Denys Lasdun & Partners
14	Library Phase 1 (north)	1966-68	Denys Lasdun & Partners
22	Careers Centre (originally squash courts)	1964-67	Denys Lasdun & Partners
25.1,2	Boiler House, Stores, etc	1965-66	Denys Lasdun & Partners
104	Suffolk Walk	1964-67	Denys Lasdun & Partners
105	Suffolk Terrace	1964-67	Denys Lasdun & Partners
106	Norfolk Terrace	1964-67	Denys Lasdun & Partners

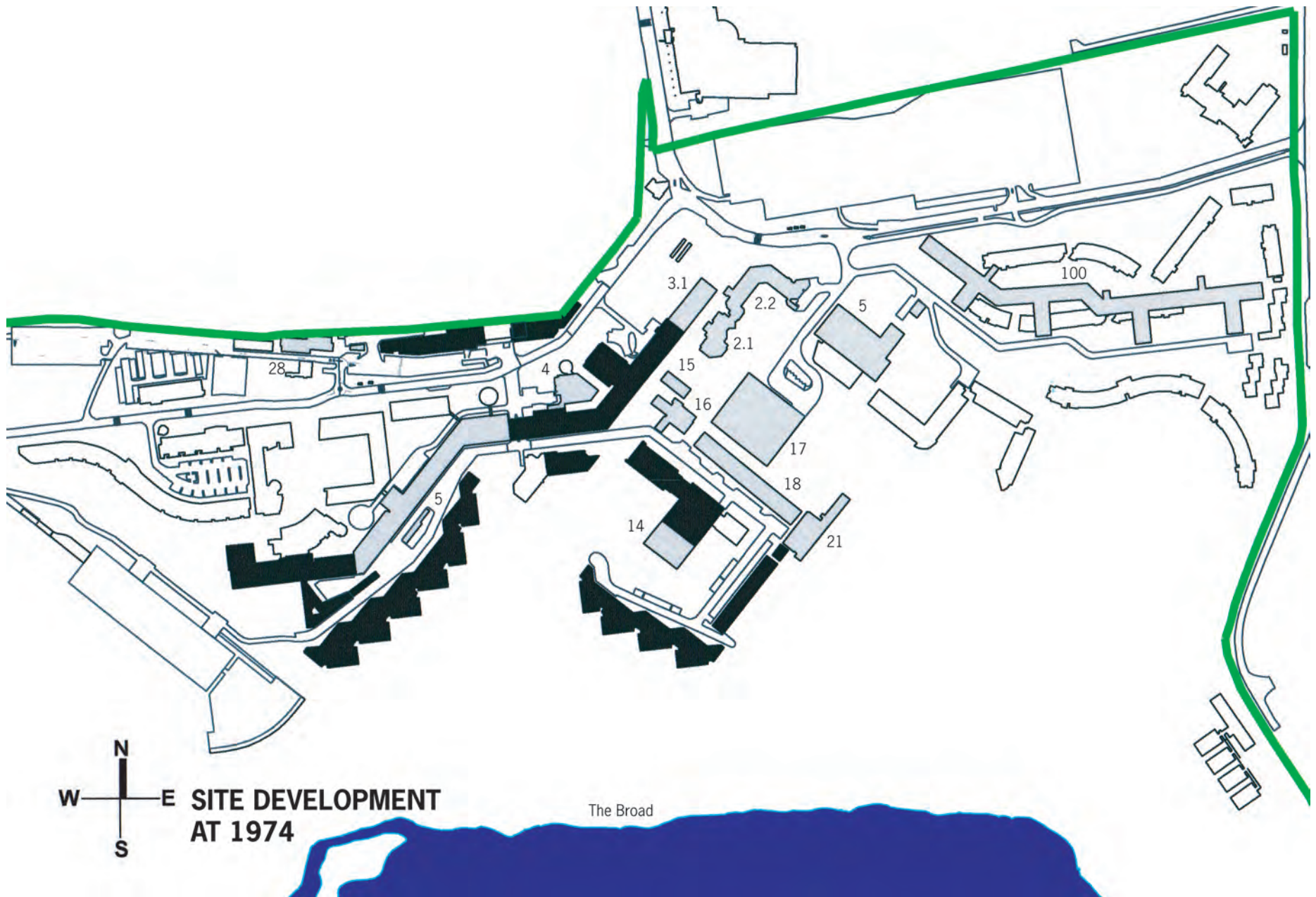
NOTE: Current building names are used in this and the following chronological plans.



Chronological plan: 1974

The buildings completed between 1969 and 1974 were:

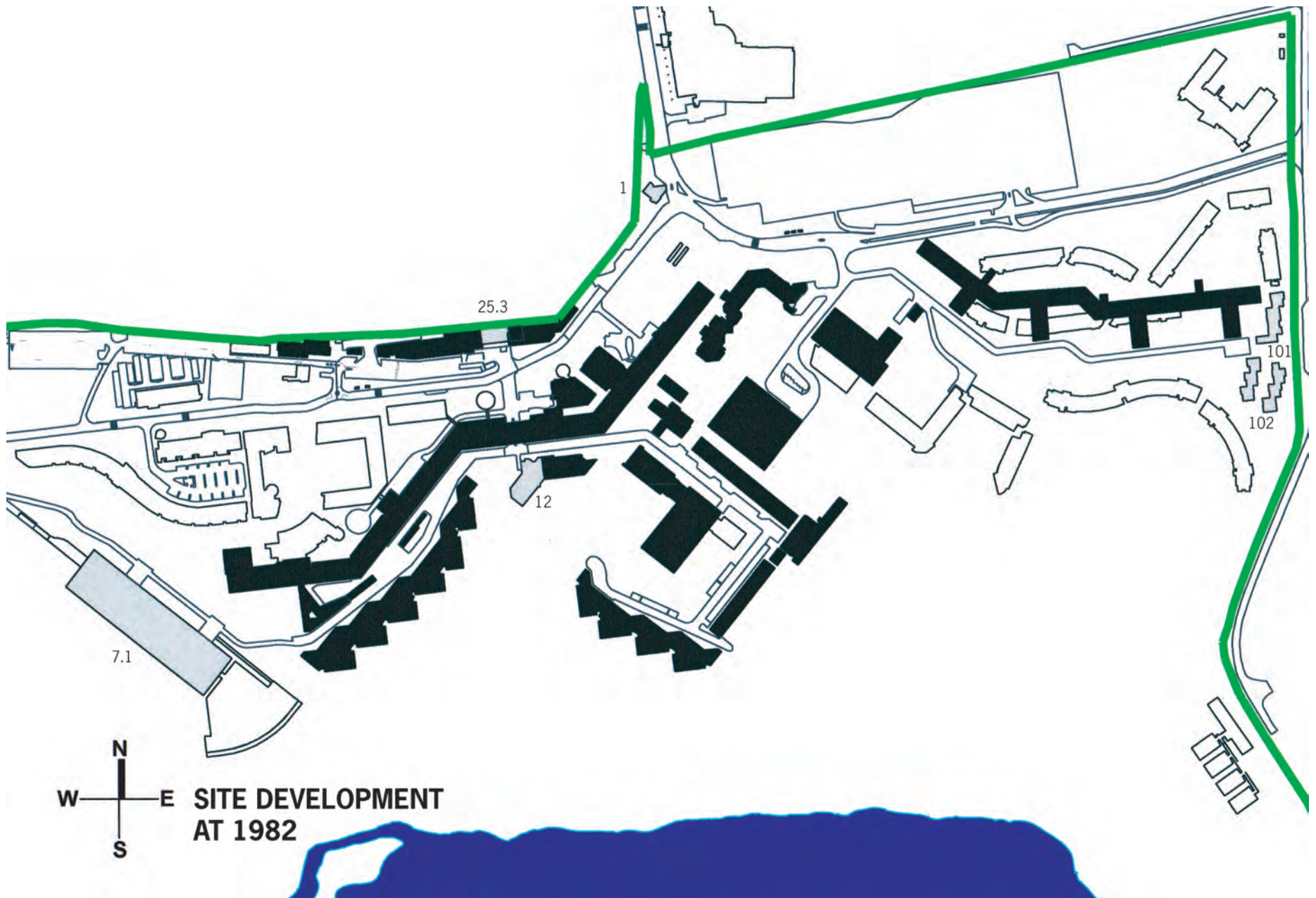
	Name	Date	Architect
2.1	Council House	1972-74	Feilden & Mawson
2.2	Registry	1972-74	Feilden & Mawson
3.1	Teaching Wall: Arts II	1968-70	Feilden & Mawson
4	Chemistry extension	?	?
5	Teaching Wall: Environmental Sciences	1971-74	Feilden & Mawson
14	Library Phase II (south)	1972-74	Denys Lasdun & Partners and Feilden & Mawson
15	Chaplaincy	1970-71	Feilden & Mawson
16	Restaurant	1969-71	Feilden & Mawson
17	Union House	1972-73	Johns, Slater & Haward
18	Shops with offices above (Street)	1970-72	Johns, Slater & Haward
21	Music Centre	1971-73	Arup Associates
23	Congregation Hall (old sports hall)	1970-71	Johns, Slater & Haward
28	Health Centre (former)	1972-73	Feilden & Mawson
100	Waveney Terrace	1969-72	Norwich Partnership



Chronological plan: 1982

The buildings completed between 1974 and 1982 were:

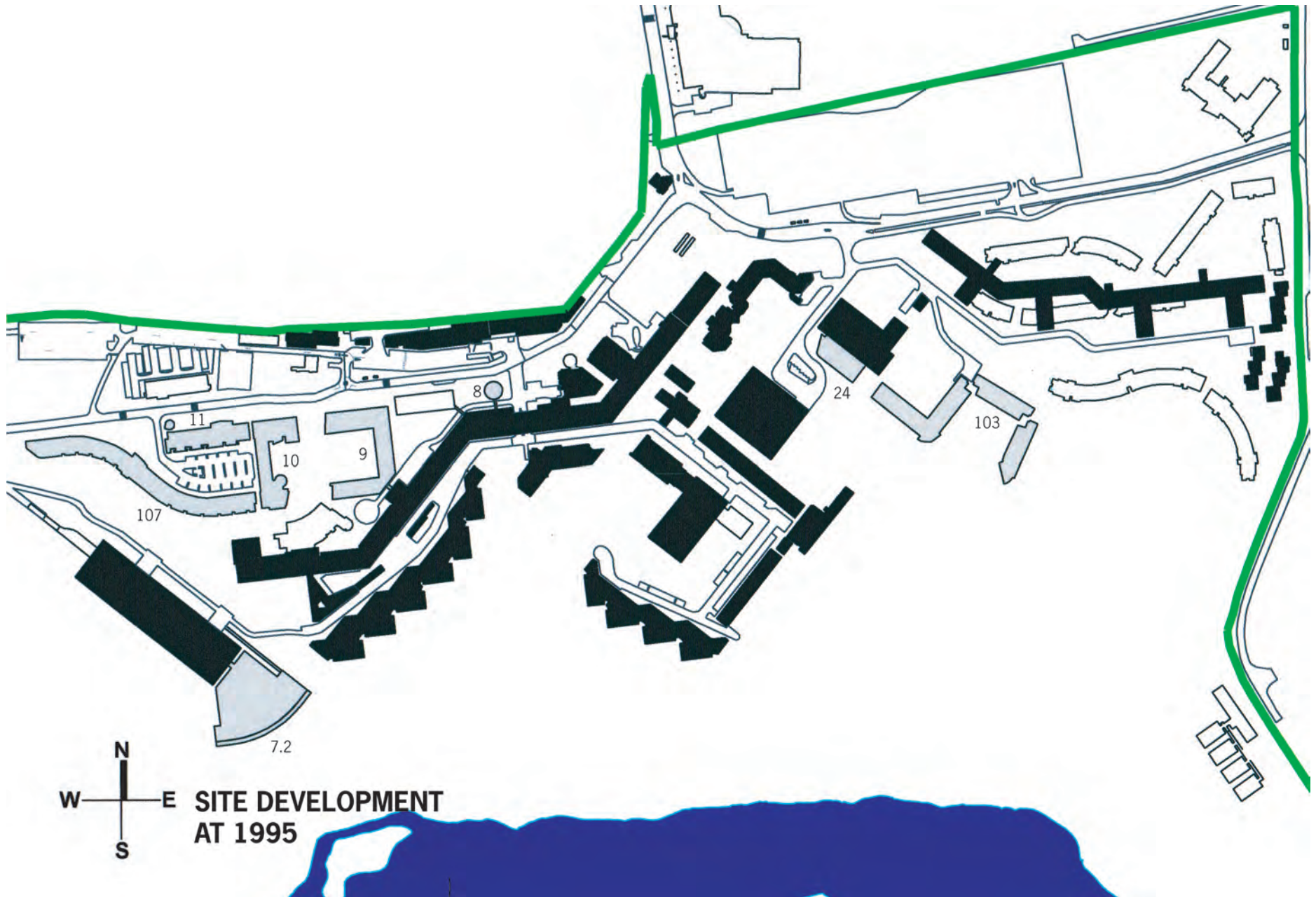
	Name	Date	Architect
1	The Lodge	1976	Feilden & Mawson
7.1	Sainsbury Centre for the Visual Arts	1975-78	Foster Associates
12	Computing Centre Phase II (west)	1981-82	Feilden & Mawson
25.3	Maintenance Building	1976-77	Edward Skipper
101	Orwell Close	1978-79	Anthony Falkener
102	Wolfson Close	1979-80	Anthony Falkener



Chronological plan: 1995

The buildings completed between 1982 and 1995 were:

	Name	Date	Architect
7.2	Crescent Wing	1989-91	Foster Associates
8	Climatic Research	1984-85	Rick Mather Architects
9	Education and Computing Sciences	1982-85	Rick Mather Architects
10	The Queen's Building	1992-94	John Miller & Partners
11	Elizabeth Fry Building	1993-95	John Miller & Partners
24	Drama Studio	1992-94	Rick Mather Architects
103	Nelson Court	1991-93	Rick Mather Architects
107	Constable Terrace	1992-93	Rick Mather Architects



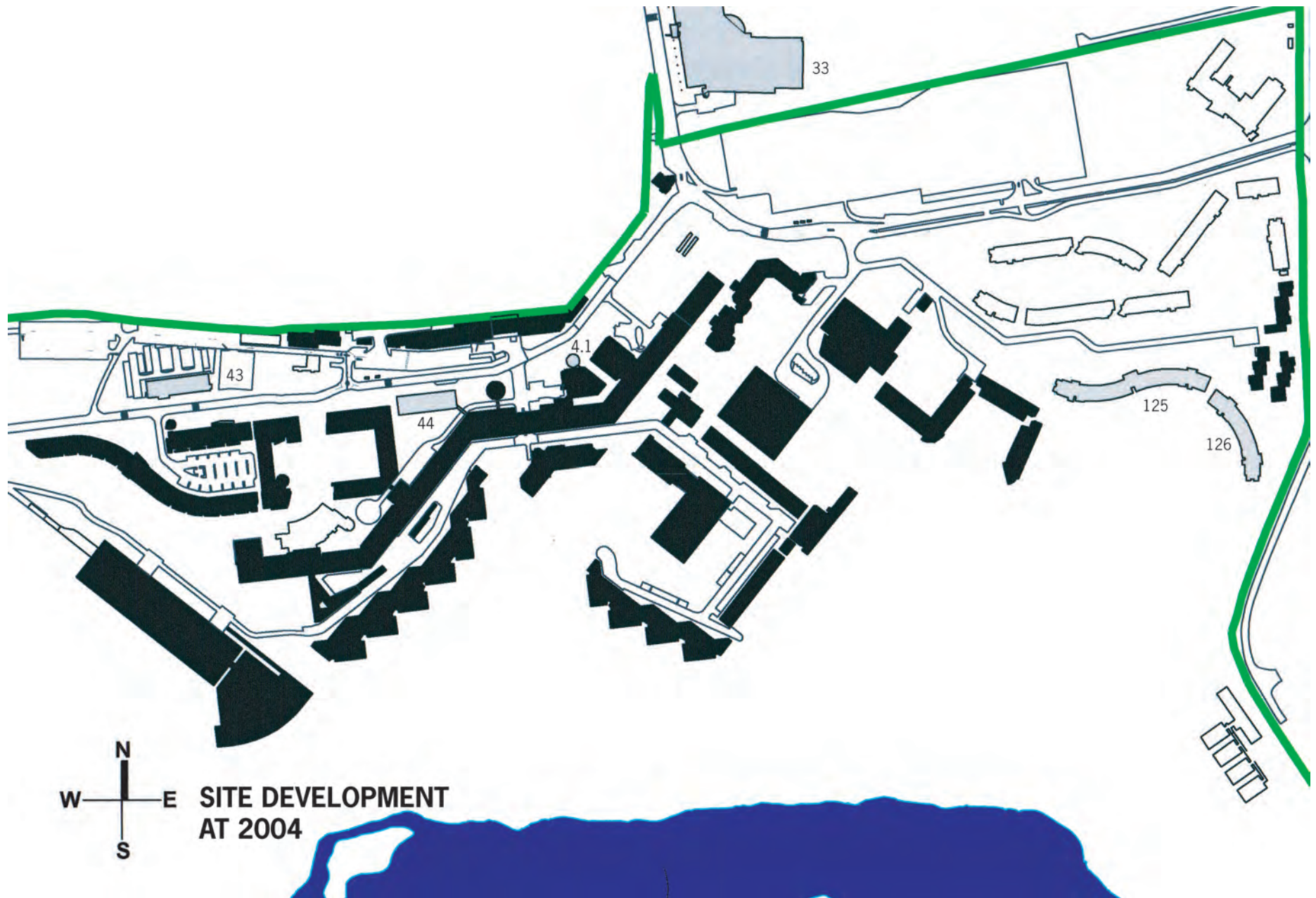
Chronological plan: 2004

The buildings completed between 1995 and 2004 were:

	Name	Date	Architect
4.1	Biophysical Chemistry	2001-02	RH Partnership
33	SportsPark	1998-99	RH Partnership
43	School of Medicine, Health Policy and Practice	2002-04	Robert Matthew Johnson-Marshall (RMJM)
44	Zuckerman Institute for Connective Environmental Research (ZICER)	2001-03	Robert Matthew Johnson-Marshall (RMJM)
125/126	Colman House	2003-04	LSI Architects

The buildings demolished between 1995 and 2004 were:

	Name
100	Waveney Terrace



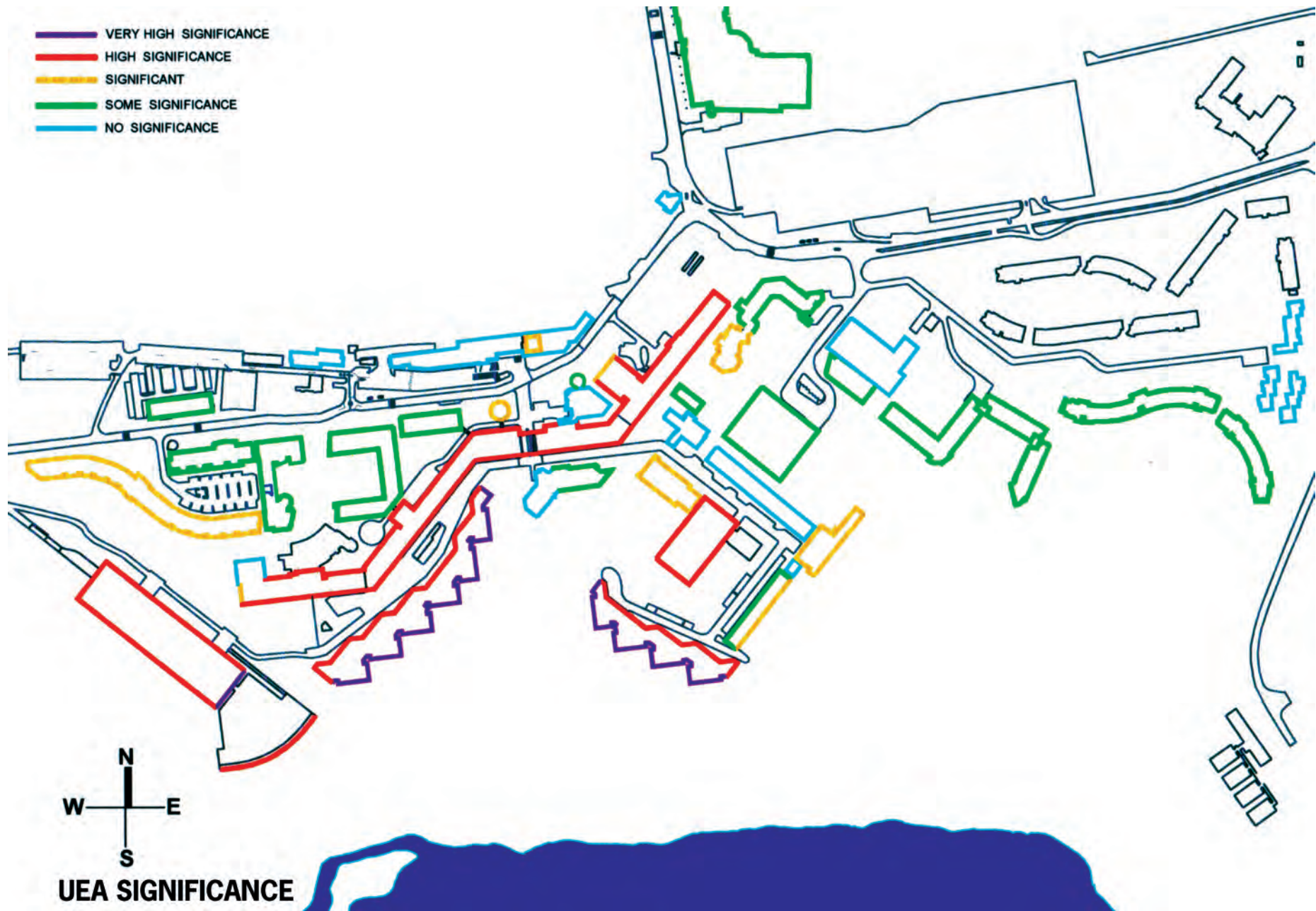
Listing

The listed buildings are toned. The main walkways are also listed: they are colour-coded red.



Significance

The buildings are colour-coded according to the assessment of significance in the Conservation Development Strategy. For some buildings, elevations are assessed individually, so the colour-coding changes.



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