

Design & Access Statement

The Elsfield Project

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1.0 Introduction

12th December 2023

1.1 Report Structure and Objectives

This document forms the Design and Access statement and Planning Statement, providing background context and detail to the development site.

The report is structured into 10 main sections, including an introduction to the site, detailed site analysis, design approach and key strategies.

1.2 Project Scope and Description

The scope of the project includes a residential development 6 x 2bed and 3 x 1bed apartments in the northern end of the rear garden of No 9 Elsfield Way OXFORD OX2 8EW See plans and elevations in Appendices 1, 2 & 3

1.3 Project Team

Planning Consultant: Walker Stuart Land & Planning Ltd

Architect: Ifor Rhys Ltd

Drainage Consultant: Taylor Consulting Engineers

Renewable Energy: Consultant: IJO Power Ltd

Green & Blue Roof Consultants Optigreen Ltd

Biodiversity Consultant: Ecology by Design

Energy Consultant: Cotswold Energy Consultants

2.0 Brief

2.1 Client's Brief

To design a mix of 1 and 2 bed apartments whilst incorporating the various planning requirements as detailed in the Pre Application report Ref: 22/01268/PAC dated 21/6/22.

The site to be car free with access to the site for pedestrians and cyclists from Harefields via the adjacent site.

2.2 Site Location

The site is located to the north of Sunnymead, a predominantly residential area due north from the Oxford Central Area, and forms the northern part of the rear garden of No 9 Elsfield Way Oxford OX2 8EW The site lies adjacent to the recently completed Elsfield Hall development of 26 mixed use apartments. (Appendix 4)

2.3 Policy Requirements

The design is to satisfy the requirements of the following plans:

Wolvercote Neighbourhood Plan

GBS5 - Biodiversity

CHS2 - Electric Vehicle Charging Points

CHS3 – Safe Access Routes

BES1 - Brownfield sites

BES4 – Drainage and Flooding

Oxford Local Plan 2036

S1 - Presumption In Favour of Sustainable Development

S2 - Development Contributions

H2 - Delivering Affordable Homes

H10 - Accessible and Adaptable Homes

H14 - Privacy, Daylight, and Sunlight

H15 - Internal Space Standards
H16 - Outdoor Amenity Space Standards
DH1 - High quality design and place making
DH7 - External servicing features and stores
RE1 - Sustainable Design and Construction
RE2 - Efficient Use of Land RE3 - Flood risk management

3.0 Consultation

3.1 Council Consultation

Pre Application Report 22/01268/PAC dated 21/06.22 was in response to a Pre App proposal to erect a five bedroom detached property on the site with associated parking. The principle of residential development on the site was accepted but the report was not supportive of the proposed scheme, stating:-

The primary issue would be in relation to land use efficiency as officers consider a greater density of development should be accommodated on the site, rather than generous five-bed dwelling houses.

3.2 Public Consultation

Site notices will be displayed around the application.

Residents at Nos 5,7& 9 Elsfield Way, Nos 1 & 2 Riddell Place and Nos 16 – 26 (evens only) Harefields have also been individually notified of the proposed scheme.

4.0 Context

4.1 Site History

66/18374/A_H - Conservatory. PDV 10th January 1966.

67/19461/A_H - Covered Way. PDV 14th November 1967.

06/01818/PDC - PERMITTED DEVELOPMENT CHECK - Re-build outhouse. PNR 20th September 2006.

14/00429/FUL - Demolition of existing houses at 3 to 9 Elsfield Way. Erection of 4 x 1-bed and 18 x 2-bed flats to frontage with 6 x 4-bed houses to rear. Provision of 40 car parking spaces, amenity space together with bin and cycle stores. New vehicular access and slip roads from Elsfield Way (A40).

(Amended plans) (Amended description). REF 1st July 2014

4.2 Land Ownership

The land is owned by [REDACTED] 9 Elsfield Way OXFORD OX2 8EW

4.3 Transport Links & Amenity

Public Transport – The nearest bus stops are located along Banbury Road, circa 250 metres from the main site access. These stops facilitate a frequent bus service into Summertown, Oxford and other local areas such as Headington; and also regional centres such as Kidlington, Woodstock, Bicester and Banbury. Therefore, the site is well located in terms of access to public transport.

4.4 Access and Parking

Agreement in principle (Appendix 5) has been reached between Oxford City Council and the applicant for access to the site via the adjacent Elsfield Hall site, which has vehicular access to Harefields. The access area is hatched GREEN on Appendix 6. The legal Agreement is being finalised for unrestricted access for pedestrians and cyclists through this area, and for the occasional access for delivery and refuse vehicles, and construction traffic. The development site is proposed to be car free.

4.5 Site Context This application refers to garden land associated with No 9 Elsfield Way OX2 8 EW. The application site lies within the Cutteslowe area just north of the A40, which forms part of the ring road and lies near to important public transport links on Banbury Road. These provide good

accessibility to both Oxford's train stations and central shopping. The site is also in close proximity to several important cycle routes.

The land in question is a backland area behind No 9 Elsfield Way and Harefields. The site also lies to the west of the Elsfield Hall site, which has recently been redeveloped to provide a high density residential scheme for flatted dwellings (reference: 18/03384/FUL). (Appendix 6)

The application site would lie a minimum of 27.5 m from the houses at Elsfield Way, a minimum of 12m from the townhouses on Harefields, at least 22m from the new flats on the Elsfield Hall site to the east and lies to the south of the rear garden of the bungalow at 2 Riddell Place

4.6 Ecology & Environment

The site comprises the rear garden of No 9 Elsfield Way and has not been cultivated for a while (Photos at Appendix 7). The proposed development occupies the majority of the site and will be paved around the perimeter. It is therefore, being proposed to incorporate a 'Green' roof into the design planted with some 50 varieties of wild flowers in order to enhance the biodiversity of the finished development. (Appendix 8)

Six bee 'Hotels' will be fixed to the external walls of the building, and the owner of No 9 Elsfields Way has agreed to the planting of two mature flowering cherry trees in her remaining garden as compensation of two old apple trees that were on the application site a few years ago.

4.7 Flood Risk

The site is located in Flood Zone 1 and is at minimal risk of fluvial flooding.

5.0 Design Approach

5.10 Site Analysis

The local area is made up of a variety of housing. The buildings fronting Elsfield Way are almost exclusively three storey with the exception being the large houses closer to the roundabout. At the rear the variety is more apparent, where the character is defined by a mix of two and three storey buildings, but is strongly influenced by the block of three storey flats that have been recently completed on the Elsfield Hall site next door.

5.20 Design Concept

The building has been designed to meet the Council's requirement for a high density development and to meet the stated improvements in energy conservation, biodiversity and storm water attenuation, as indicated in their Pre App report Ref: 22/01268/PAC dated 21/06.22.

5.30 Design Strategy

The built form containing the habitable (flatted) accommodation comprises three blocks with a stack of 2-bed flats at the north and south ends and the one bed flats in the centre block. The intention is to give the form a comforting symmetry and to reflect the design strategy adopted at the nearby flatted development at Elsfield Hall.

The design strategy of breaking the overall form down into the three "pods" with recessed stairwells and the Mansard roof at second floor level serves the appearance in an attractive manner. The use of varying materials brick/zinc/ obscure glass balustrade is to effectively conceal the PV array when viewed from ground level, as well as providing protection from falling during maintenance of the array. Curtain walling to define the stairwell/ use of obscure glass/solid panelling allows variety into

the appearance of the building. The building generally has a 1m perimeter to allow access for maintenance and construction works.

5.40 Materials of Construction

Bricks/Zinc/green roof/ timber frame development/off-site manufacture of construction elements / walls/floors to exceed minimum requirement and to be to a Passiv Haus standard for thermal efficiency and airtightness, following Robust Details specifications wherever appropriate. There is a PV array on the roof to support energy use in the individual flats.

5.50 Proposed Scheme

In order to meet these requirements the proposed design incorporates a BLUE roof to attenuate excessive storm water, a GREEN roof to accommodate a vegetation blanket of wild flowers with irrigation in order to show an enhancement in biodiversity on the site and a YELLOW roof consisting of 52 solar panels in order to achieve at least a 25% energy contribution from on - site renewables. (Examples at Appendix 8 &9)

5.60 Fenestration

In addition, the form of the proposal has been designed specifically to ensure that the west elevation is free of fenestration from habitable rooms to minimise actual and perceived overlooking of the rear garden of No 7 Elsfield Way. All rooms on the west side of the building will be bedrooms to ensure that there is minimal acoustic intrusion to this sensitive space. Glazing to the curtain walling to the recessed stairwell will either be obscure glazed or solid panels to ensure that there is minimal chance of incidental overlooking of No 7 Elsfield Way when the flats are being accessed by the residents. The stairwell will also be enclosed to ensure that there is no disturbance to the surrounding residential areas.

5.70 Lighting

Lighting in the stairwells be controlled by PIR sensors and only active during non-daylight hours in order to minimise light from the stairwell spilling onto the adjoining garden. The stairwells will be unheated.

External lighting will be restricted to the north and east elevations only and will be low level bollard lighting to minimise light disturbance to the surrounding residential neighbourhood.

5.80 Insulation

The three blocks will be fully insulated all round; ground floor; external walls; roof and including the internal walls to the stairwell in order to ensure and maintain a high level of thermal efficiency to the living areas and leaving the stairwells, which do not require any specific level of thermal comfort, to be unheated.

5.90 Storey Heights

The proposal building is three storeys high with a Mansard roof measuring 9.1m min height including the array of solar panels. This is comparable to a maximum height of 10.8m for the recent development on Elsfield Hall next door

5.91 Housing Mix and Density

The site area measures 426sq m such that the overall density is approx. 210 units per ha.

5.92 Space Standards:

Flat	Target GIA sq m	Actual GIA sq m	
Flat1	61	62	
Flat2	50	49	
Flat3	61	68	
Flat4	61	69	
Flat5	50	55	
Flat 6	61	69	
Flat 7	50	69	
Flat 8	62	55	
Flat 9	62	69	

All units have individual courtyards on the ground floor and balconies on floors one and two.

5.93 Waste Bins

Located at the north end of the site with immediate pedestrian and cycle access from the shared drive/parking area off Harefields, comprising:-

2 no. 1100 litre wheelie bins. One for recyclable waste and one for non-recyclable waste. Household waste will be the responsibility of the individual householders and to work within the requirements of Oxford City Council Waste Collection conditions – there are no communal collection point proposed

5.94 Cycle Racks The cycle racks are covered and will permit the storage under shelter of 15 cycle spaces (one per bed) plus 8 i.e. 23 cycle spaces accommodate by 13 Sheffield stand type set under a proprietary canopy. (See example at Appendix 10)

6.00 Roof Design

The roof combines blue and green roof technologies together with an array of 52 solar panels.

Conventional green roofs use a drainage layer to provide lateral drainage and irrigation. Blue roof technology, however, aims to increase both the volume of water stored and control the amount of water released. The proposed run-off rate is approximately 2l /sec. Combining the technologies increases the overall benefits of greening the roof.

Whilst it is increasingly common to combine solar panels with green roofs, this proposal also includes solar panels where green roof and solar technologies are integrated in a seamless fashion. In addition, the green roof is also designed to maximise biodiversity. Recent research has shown that green roofs can also provide a boost to the amount of solar energy gained from the PV panels.

The key factor in delivering a bio-solar roof lies in the integration of the solar mounts with the engineered layers of the green roof. Fortunately there are systems that have been developed to achieve this and consultants from such companies have been engaged to co-operate in the design in order to achieve the optimum combination of roof design for this project. Not only does this ensure that integration ensures good all round performance, but also that the installation is easier to deliver. (See Appendix 8 for examples)

7.00 Sunlight Study

A sunlight study has been undertaken utilising the computer model and sunlight data for Oxford and using a median date of September 2023, which indicates that the domestic housing at Nos 5, 7 & 9 Elsfield Way will not be significantly affected, neither will the residents of Harefields which back onto the site, nor the flats in the adjoining Elsfield Hall development, although flats at the north end may be overshadowed for a short time at the very end of the day. (Appendix 13)

8.0 Site Solar Generation and Consumption

8.10 Solar PV

Solar PV is an essential consideration for reducing the demand on grid supplies and facilitating the generation of renewable, clean energy. Achieving the best possible alignment between annual property consumption and on site renewable generation is a key aim of this project. Nevertheless, there are always some spatial constraints to navigate.

The proposed solar array design includes 52 x 435W Jinko Tiger Neo solar panels, maximising the available roof space available. With an array peak output of 22.62kW, the array is expected to produce 20901kWh per annum. This can be compared with the expected consumption of the building.

8.20 Energy Consumption

A recent Government report concluded that the typical electrical consumption for electric-only flats was 100kWh/sq m. This was based on new domestic buildings in the period 2015-2017, but it is the latest official guide. However, since that time, insulation standards have improved considerably, suggesting that a significant reduction in consumption is easily achievable. Nevertheless, using the earlier criteria, the building can be expected to consume 56,500kWh of electricity per annum, as shown below.

Flat No	Beds	Sq m	KWhr/sq m	KWhr/annum
1	2	62	100	6200
2	1	49	100	4900
3	2	68	100	6800
4	2	69	100	6900
5	1	55	100	5500
6	2	69	100	6900
7	2	69	100	6900
8	1	55	100	5500
9	2	69	100	6900
			TOTAL	56500

Energy Consumption v Generation per Month



8.30 Energy Summary

Estimated annual Consumption 56500 kWh

Estimated annual solar generation 20901 kWh

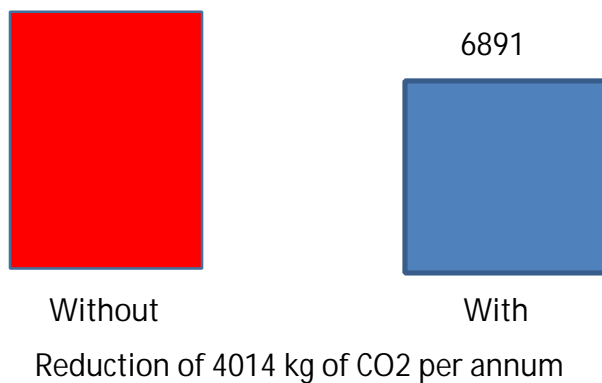
Percentage of electrical consumption generated by solar on site 37%

This exceeds the 25% criteria stipulated in the Oxford City Local Plan

8.40 Reduction of Co2

On average, 0.193 kgCo2 is emitted for every kWh of electricity generated by the National Grid, consequently the installation of solar panels as proposed on this development will lead to a reduction in Co2 of 4014kg per annum.

Annual Kg of CO2 produced with and without Solar Panels 10905



Reductions in CO2

Property	No of Beds	PV KW	No Panels	TER	DER	%Pass
Flat 1	1	2.17	5	29.60	16.24	44.5
Flat 2	2	2.61	7	32.53	16.22	50.1
Flat 3	2	2.17	5	28.42	16.47	42.1
Flat 4	2	2.17	5	26.32	15.3	41.9
Flat 5	1	3.05	7	28.69	14.48	49.5
Flat 6	2	2.17	5	26.17	15.15	42.1
Flat 7	2	2.61	5	28.72	14.92	48.1
Flat 8	1	3.05	7	31.41	18.05	42.5
Flat 9	2	2.17	5	28.56	17.05	40.3
						401.1
Percentage reduction in CO2					Average	44.6%

8.50 Solar Array:

The solar array has been designed with 52 x 435W Jinko Tiger Neo all-black panels to be mounted on an aluminium framework. The panels will be split into nine strings supplying power individually to the nine flats.

The panels are class leading with excellent module efficiency and an impressive 25 year product warranty and 30 year performance warranty.

8.60 Inverter Capability:

Flats 2 and 5 are equipped with 2.5kW S6 Mini inverters from Solis, each connected to a string of seven solar panels. All remaining flats are equipped with 3.0kW S6 Mini inverters from Solis, each connected to a string of five solar panels.

9.0 Drainage Strategy

9.10 The site has been assessed by Taylor Civils Consulting Ltd, whose full report is presented at Appendix 12 which concluded:

Infiltration is not viable due to the ground conditions and high-water table.

Agreements are in place for drainage connections from the development to the existing drainage serving No 9 Elsfield Way.

SuDS options have been used for the new surface water drainage in the form of green roof and porous paving.

The new surface water system has been designed to attenuate all storm water on site for storms up to and including the 100-year+ 40% climate change with a controlled discharge via a new pump chamber to the existing drainage system.

The foul water from the site discharges via a new pumped system to the existing foul sewer at No 9 Elsfeld Way

Thames Water have been consulted on the proposed drainage arrangements

10.0 Landscape Design Proposals

10.10 Hardscape Strategy

The surface water from the development will be attenuated using green roofs, and porous paving before a controlled discharge via new pump chamber into the existing surface water system

10.20 External Lighting

External lighting will be restricted to the north and east elevations only and will be low level bollard lighting to minimise light disturbance to the surrounding residential neighbourhood.

11.0 Appendices

Appendix 1 Floor Plans

Appendix 2 Elevations

Appendix 3 Bird's Eye Views

Appendix 4 Location Plan

Appendix 5 Access Agreement

Appendix 6 Access Details

Appendix 7 Block Plan

Appendix 8 Site Photographs

Appendix 9 Typical Green & Blue roof Design

Appendix 10 Typical Green & Solar section

Appendix 11 Proposed cycle rack style

Appendix 12 Drainage Strategy

Appendix 13 Sunlight Study

12.0 Construction Traffic Management Plan

12.10 To be conditioned