

Design and Access Statement for development at **Abbey Gardens, Blunsdon**

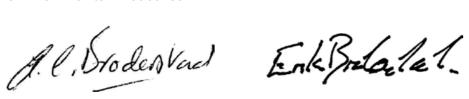
History and present day

The plot was connected to Godstow Nunnery, but following Henry VIII dissolution of the monasteries, it came into the Brydges family, who built a large 17th Century house on the plot. In 1860 the house was bought by Joseph Clayton de Windt, who demolished the grand house so he could build an even bigger house. Unfortunately, Mr. Clayton de Windt was killed in 1863, the year before his grand house was completed. The house changed owners a number of times before a great fire in April 1904 left the house as a ruin. The Mr. Clayton de Windt house, because of its size, began to be known as an Abbey although the house was always just a domestic house. The kitchen garden plot was bought by a local farmer called Henry Hitch, who used the plot for grazing his cattle.

Then our Grandfather and Grandmother bought the plot in 1950 and built a family home to live in with their son, Adrian and daughter, Maureen who became our mother. When our mother was older, she made the plot into a commercial Market Garden, paid business rates to Thamesdown District Council from 1950's to 1970's. Maureen married Peter Broderstad in 1959 and Erik was born in 1960 and I, Astrid, was born in 1962. We both had a very happy childhood at Abbey Gardens. When our Grandparents died in 1983, our mother's brother, Adrian, then took over the house and it then became clear he did not want family to visit and lived as a recluse until his death in 2009.

Our mother, Maureen, passed her inheritance to Erik and me. My brother and I then set about replanting the house garden, which Adrian let go to ruin. Having had such happy memories of living at Abbey Gardens, both of us wanted to live there with our families, but with only one house there now needs to be built a second house. With neither of us having the money to build a second house, we noted over the years Abbey Gardens had houses all around it, so we were advised to look for builders who cared for the environment and who were keen on design so the plot would not be spoilt. Over time we spoke to many building firms, but were not convinced their proposals were going to sit well with the Abbey Gardens that we both loved. We both wanted the new homes to be sympathetic to the look of the Manor House that had been built between 1860 and 1864 that stood to the east of our plot as a glorious ruin since 1904. Then we found Bower Mapson Homes Limited, whose philosophy was to build homes that blend harmoniously with their setting as well as caring for the environment. The firm has won many National Design and Environmental Awards for their schemes. So we commissioned them to build the second house for us, telling them keeping Abbey Gardens from being spoilt was key and insisting they could only build four extra houses for themselves. Plus that my brother and I wanted to help St. Andrew's Church by leasing land to them for much needed car parking.

The following pages in this booklet are what we propose from design and access to environmental measures.



Astrid Broderstad & Erik Broderstad



Market Garden circa 1960



Market Garden circa 1970

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Context of these proposals

This site lies in the pretty area of Blunsdon. It has a good public transport service and access to local facilities and schools. In short, it is exactly what the Borough needs to compliment large volume builder estates. As not everyone wants to live on a large estate, plus the Council should have a range of homes, large estates to bespoke little ones.

Background on Bower Mapson Homes Limited

As a locally based, locally operating independent company, we maintain a clear design led philosophy to ensure to the best of our ability that what we build beneficially adds to each particular locale's built heritage. Our approach therefore is always to take a responsible view of designing our housing to both blend harmoniously with particular settings, as well as seeking to bestow a genuine sense of identity and pride in the homes for the new owners. Put simply, we hope to create environments that will enhance the lifestyles of new residents and the indigenous population alike. Examples of our earlier schemes in Wiltshire and Oxfordshire are shown below.

Third party recognition

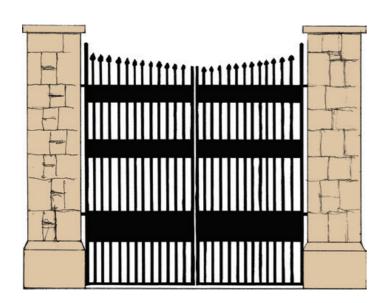
Over the 40 years of trying to make best places to live, Bower Mapson Homes have amassed 30 National Design Awards for our developments. As a commentary on our aspirations, we are proud to have awards from The Sunday Times British Homes Awards, Daily Express, BBC2's Britain's Dream Homes programme, DOE/RIBA Awards, Civic Trust Design Award, Wiltshire Housing Design Award, What House? Awards, a Small Builder of the Year accolade, plus many others.



Design commentary



Plot 1



Entrance



Plot 2



Plot 3

Design commentary



Plot 4

We were inspired by the grand house to the east of our site, with its steep gables and stone materials with architectural stonework around the windows, steep roof lines, giving a gracious feel to the grand house. Even though not being able to be lived in, it sits proudly, showing design elements that do not lose their potency withstanding the test of time.

Accordingly, we have used the same designs steep gables and roof pitches as well as similar materials; stone for the walls with architectural stonework around the windows, with reducing stone tiles for house roofs with slate for the roofs of outbuildings with cast stone plinths. Complimented with white finish joinery throughout with natural timber front doors and vertically boarded timber garage doors to each garage outbuilding so the scheme integrates well with the stone walls that surround the site and stone walls dividing the site internally.

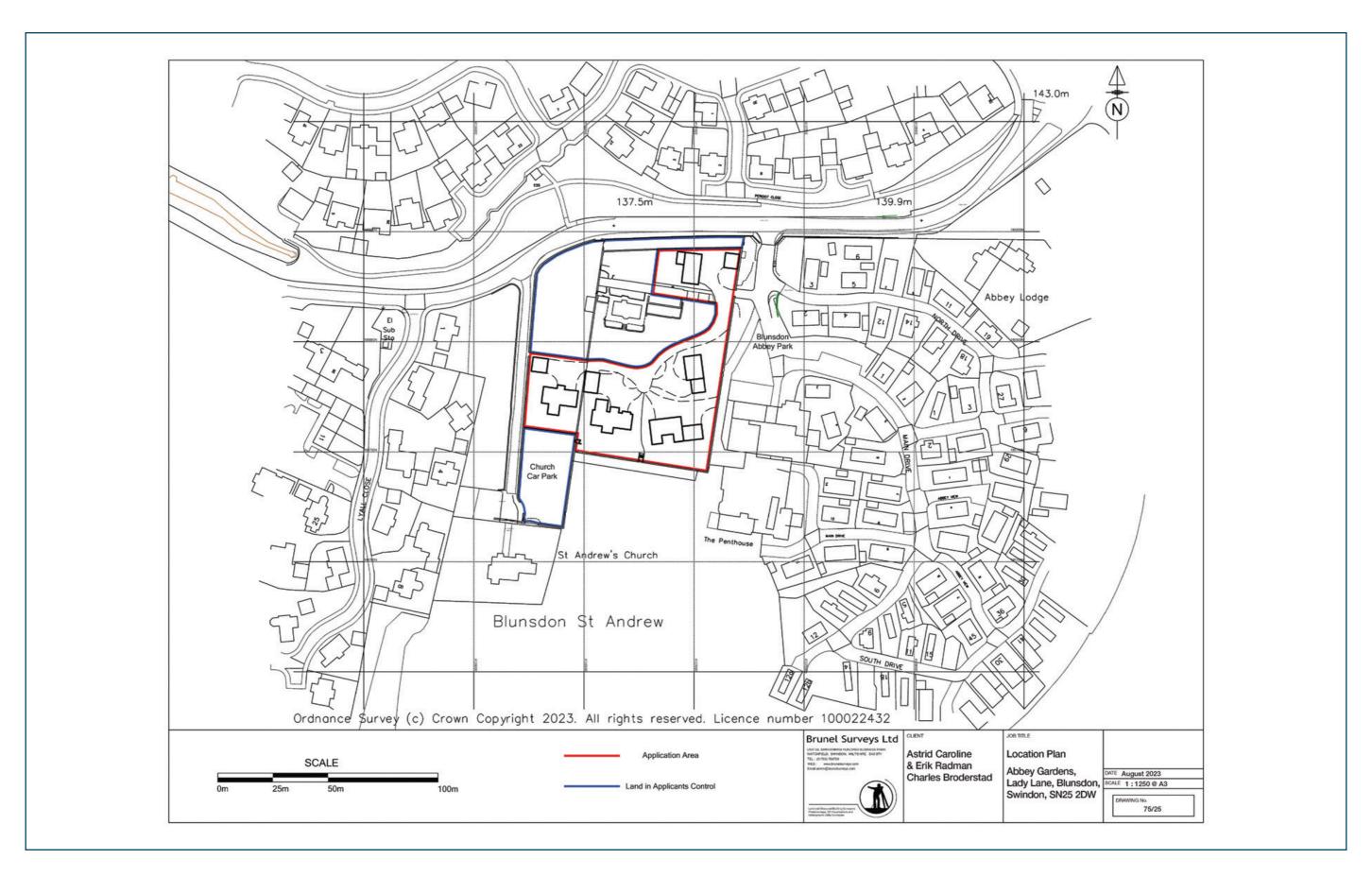
The homes have been designed to provide individual family homes to compliment big volume estates, as the Borough needs both types of homes.



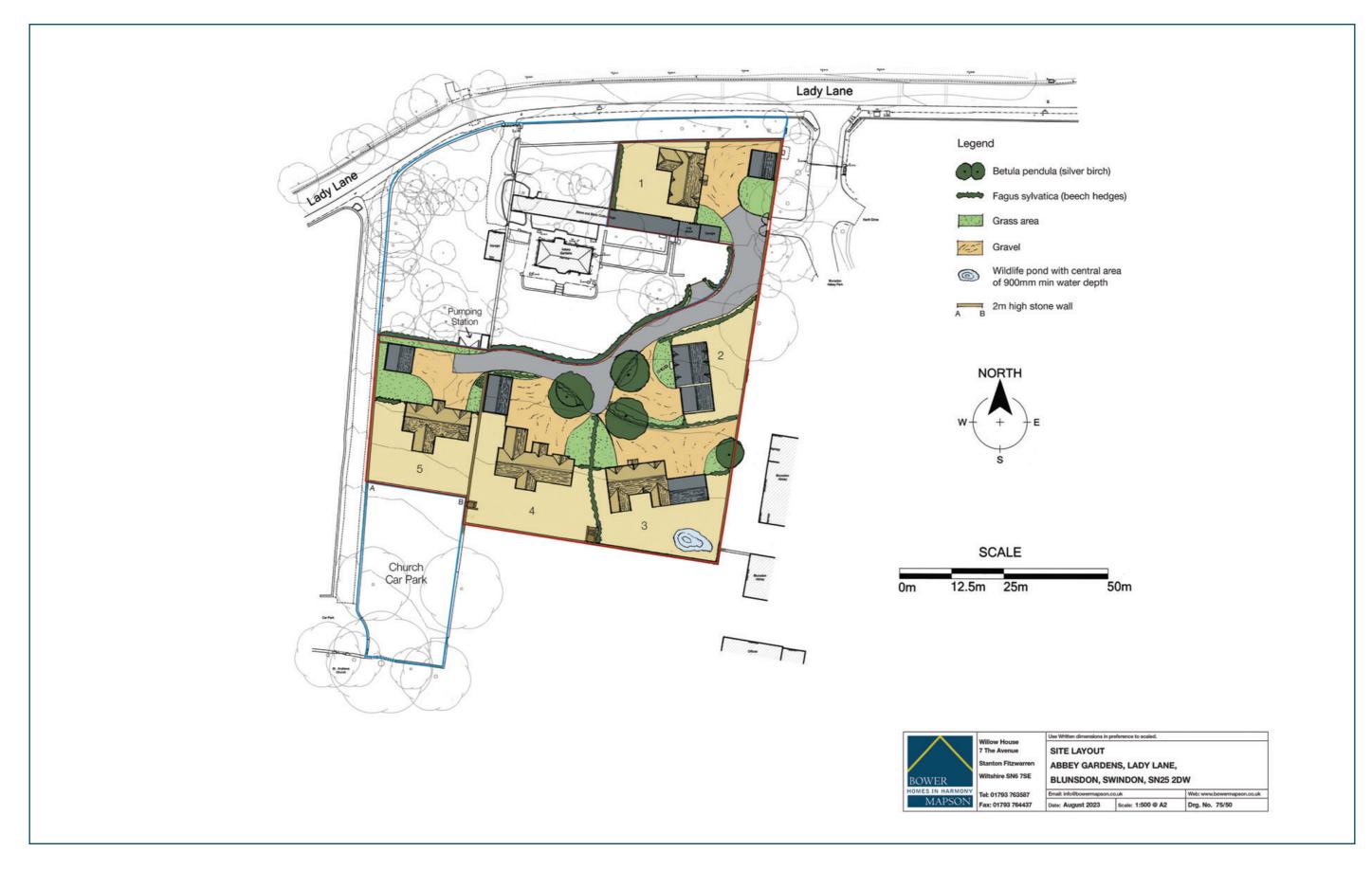
Plot 5



Location plan



Site layout



All the homes feature no fossil fuel, but will be heated by a combination of solar panels, air-source heat pump systems with batteries.

To do this we partnered with a Company called Better Planet UK Ltd and worked with the Engineer, Oliver Larsson.

Oliver visited the site and then came up with the proposal for the heat pump, solar panels and battery. We provided Oliver with sections for the rooms as the next stage was to complete a room-by-room heat loss calculation to specify the right sized heat pump complete with a site survey for the solar. The following pages illustrate what Oliver designed for this site.

An air source heat pump system for Abbey Gardens, SN25 2DW 05/04/2023



Design – Supply – Installation - Commissioning

Indicative proposal based on estimation from EPC rating or fuel consumption. This is relevant for indicative specification and pricing. Pricing and size of the system will later be confirmed by a heat loss calculation.

Proposed Indicative Specification

- o Vaillant aroTHERM Plus 7kW Inverter driven ASHP
- Vaillant sensocomfort controller
- Vaillant uniSTOR hot water cylinder 300L
- Buffer tank as required
- o Hard water de-scaler, magnetic system filter
- o Electrical connections as required
- o Full installation pipe lagged with superior Armaflex insulation
- MCS Certificate,
- o building control notification
- o Internal and external pipe runs are not included at this stage, the price for this will be assessed during a survey



Boiler Upgrade Scheme (BUS):

The installation could be eligible for a £5,000 voucher. Please find more information from the government website at: https://www.gov.uk/apply-boiler-upgrade-scheme

Price (No BUS): £14,021

Price after BUS: £9.021

Vaillant Air Source Heat Pump Brochure:

https://www.vaillant.co.uk/downloads/aproducts/renewables 1773377.pdf

Indicative proposal prepared by: Oliver Larsson

This is an indicative proposal for discussion purposes only. Once specifications and price have been agreed in principle, a formal quotation will be issued



oliver.larsson@betterplanet.co.uk



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A Solar PV Proposal for Abbey Gardens Plot 1, SN25 2DW 03/04/2023



Design - Supply - Installation - Commissioning

Proposed Indicative Specification for an 8.1 kWp system

- o Solar Panel: x20 Longi Solar MONO All Black PERC Half Cell 405W
- o Inverter: x1 Solis 8.0kW 5G Dual MPPT Single Phase with DC
- o Mounting System: Pitched roof mounting system
- o DC electrical installation materials as required
- o 20m x 6mm AC Rubber cable 3 core 1-phase
- o AC electrical installation materials as required
- o Commissioning and testing
- o MCS certificate and building control notification & DNO application

Assumptions

- o $\,$ Roof orientation from south: 10° and 50° pitch/10° and 30° pitch
- o Shading factor: 1.00 (unshaded)
- o System Phase: Single Phase
- o Scaffolding tower can be used. Third party scaffolding is not included in this proposal
- o We have assumed that there are free ways in the existing consumer for this installation. If that is not the case, we will have to install an additional consumer unit. The cost for this, including installation is $\pounds 500$

Estimated Yearly Energy Production: 6,201 kWh

Price: £12,758 (no VAT)

Battery Storage solution:



Tesla Powerwall 2 03/04/2023

Design - Supply - Installation - Commissioning

System consisting of:

- o Tesla Powerwall 2 13.5kWh
- o Tesla Gateway 2
- o Tesla Accessory Pack



Tesla Data Sheet:

Tesla Website:

https://www.tesla.com/sites/default/files/pdfs/powerwall/Powerwall% 202_AC_Datasheet_en_GB.pdf

https://www.tesla.com/en_gb/powerwall

Price: £12,942 (no VAT)

When included in the same contract as solar PV panels, batteries have a reduced rate of 0%. Batteries bought separately, without solar panels are subject to 20% VAT

Indicative proposal prepared by: Jamie Greening



oliver.larsson@betterplanet.co.uk

This is an indicative proposal for discussion purposes only. Once specifications and price have been agreed in principle, a formal quotation will be issued.



07582 382589

A Solar PV Proposal for Abbey Gardens Plot 2, SN25 2DW 03/04/2023



Design - Supply - Installation - Commissioning

Proposed Indicative Specification for an 8.1 kWp system

- o Solar Panel: x19 Longi Solar MONO All Black PERC Half Cell 405W
- o Inverter: x1 Solis 8.0kW 5G Dual MPPT Single Phase with DC
- o Mounting System: Schletter pitched roof mounting system
- o DC electrical installation materials as required
- o 20m x 6mm AC Rubber cable 3 core 1-phase
- o AC electrical installation materials as required
- o Commissioning and testing
- o MCS certificate and building control notification & DNO application

Assumptions

- o Roof orientation from south: 0° and 50° pitch/ 0° and 30° pitch
- o Shading factor: 1.00 (unshaded)
- o System Phase: Single Phase
- o Scaffolding tower can be used. Third party scaffolding is not included in this proposal
- o We have assumed that there are free ways in the existing consumer for this installation. If that is not the case, we will have to install an additional consumer unit. The cost for this, including installation is $\pounds 500$

Estimated Yearly Energy Production: 7,410 kWh

Price: £13,195 (no VAT)

Battery Storage solution:



Tesla Powerwall 2 03/04/2023

Design - Supply - Installation - Commissioning

System consisting of:

- o Tesla Powerwall 2 13.5kWh
- o Tesla Gateway 2
- o Tesla Accessory Pack



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Price: £12,942 (no VAT)

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07582 382589

A Solar PV Proposal for Abbey Gardens Plot 3, SN25 2DW 05/04/2023



Design – Supply – Installation - Commissioning

Proposed Indicative Specification

- Solar Panel: 26 X LONGI SOLAR 405WP FULL BLACK PV MODULE
- o Inverter: Solis 8.0kW 5G Dual MPPT Single Phase with DC
- o Mounting System: Pitched roof system
- o DC electrical installation materials as required
- o 20m x 6mm AC Rubber cable 3 core 1-phase
- o AC electrical installation materials as required
- o Commissioning and testing
- ${f o}$ MCS certificate and building control notification & DNO application

Assumptions

- o Roof orientation from south: 0° and 35° pitch
- o Shading factor: 1(unshaded)
- o System Phase: Single
- o Scaffolding tower can be used. Third party scaffolding is not included in this proposal
- o We have assumed that there are free ways in the existing consumer for this installation. If that is not the case, we will have to install an additional consumer unit. The cost for this, including installation is $\pounds 500$

Estimated Yearly Energy Production: 10,230kWh

Price: £17,178 (no VAT)

Battery Storage solution:



Tesla Powerwall 2 05/04/2023

Design - Supply - Installation - Commissioning

System consisting of:

- o Tesla Powerwall 2 13.5kWh
- o Tesla Gateway 2
- o Tesla Accessory Pack



Tesla Data Sheet:

Tesla Website:

https://www.tesla.com/sites/default/files/pdfs/powerwall/Powerwall% 202_AC_Datasheet_en_GB.pdf

https://www.tesla.com/en_gb/powerwall

Price: £12,942 (no VAT)

When included in the same contract as solar PV panels, batteries have a reduced rate of 0%. Batteries bought separately, without solar panels are subject to 20% VAT

Indicative proposal prepared by: Oliver Larsson



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A Solar PV Proposal for Abbey Gardens Plot 4, SN25 2DW 05/04/2023



Design - Supply - Installation - Commissioning

Proposed Indicative Specification

- Solar Panel: 26 X LONGI SOLAR 405WP FULL BLACK PV MODULE
- o Inverter: Solis 8.0kW 5G Dual MPPT Single Phase with DC
- o Mounting System: Pitched roof system
- o DC electrical installation materials as required
- o 20m x 6mm AC Rubber cable 3 core 1-phase
- o AC electrical installation materials as required
- o Commissioning and testing
- ${f o}$ MCS certificate and building control notification & DNO application

Assumptions

- o Roof orientation from south: 0° and 35° pitch
- o Shading factor: 1(unshaded)
- o System Phase: Single
- o Scaffolding tower can be used. Third party scaffolding is not included in this proposal
- o We have assumed that there are free ways in the existing consumer for this installation. If that is not the case, we will have to install an additional consumer unit. The cost for this, including installation is $\pounds 500$

Estimated Yearly Energy Production: 10,230kWh

Price: £17,178 (no VAT)

Battery Storage solution:



Tesla Powerwall 2 05/04/2023

Design - Supply - Installation - Commissioning

System consisting of:

- o Tesla Powerwall 2 13.5kWh
- o Tesla Gateway 2
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https://www.tesla.com/en_gb/powerwall

Price: £12,942 (no VAT)

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Indicative proposal prepared by: Oliver Larsson



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A Solar PV Proposal for Abbey Gardens Plot 5, SN25 2DW 05/04/2023



Design - Supply - Installation - Commissioning

Proposed Indicative Specification

- Solar Panel: 26 X LONGI SOLAR 405WP FULL BLACK PV MODULE
- o Inverter: Solis 8.0kW 5G Dual MPPT Single Phase with DC
- o Mounting System: Pitched roof system
- o DC electrical installation materials as required
- o 20m x 6mm AC Rubber cable 3 core 1-phase
- o AC electrical installation materials as required
- o Commissioning and testing
- ${f o}$ MCS certificate and building control notification & DNO application

Assumptions

- o Roof orientation from south: 0° and 35° pitch
- o Shading factor: 1(unshaded)
- o System Phase: Single
- o Scaffolding tower can be used. Third party scaffolding is not included in this proposal
- o We have assumed that there are free ways in the existing consumer for this installation. If that is not the case, we will have to install an additional consumer unit. The cost for this, including installation is $\pounds 500$

Estimated Yearly Energy Production: 10,230kWh

Price: £17,178 (no VAT)

Battery Storage solution:



Tesla Powerwall 2 05/04/2023

Design - Supply - Installation - Commissioning

System consisting of:

- o Tesla Powerwall 2 13.5kWh
- o Tesla Gateway 2
- o Tesla Accessory Pack



Tesla Data Sheet:

Tesla Website:

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Price: £12,942 (no VAT)

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Church

St. Andrew's Church, Tadpole Lane is just 40 metres from Abbey Gardens.

Schools

- St. Leonard's Primary School and Pre-School is just 1.5 miles from Abbey Gardens.
- **Brimble Hill School** is a Primary School for children with learning difficulties and is less than a mile from Abbey Gardens.
- **Upland School** is a mainstream Primary and Secondary, and a Primary Special School for children with severe or profound learning difficulties and is less than a mile from Abbey Gardens.
- **Great Western Academy** is a Secondary School with a Sixth Form and is just 1.3 miles from Abbey Gardens.
- **Churchward School** is a Secondary School with a Sixth Form and is just 1.5 miles from Abbey Gardens.

Doctors

Tadpole Surgery is just 1.5 miles from Abbey Gardens.

Shops

- Co-op supermarket just 0.3 miles from Abbey Gardens.
- Sainsbury's just 1 mile from Abbey Gardens.
- Coffee Café just 1 mile from Abbey Gardens.
- Barbers just 1 mile from Abbey Gardens.
- Jessica's Hair & Beauty Salon just 1 mile from Abbey Gardens.

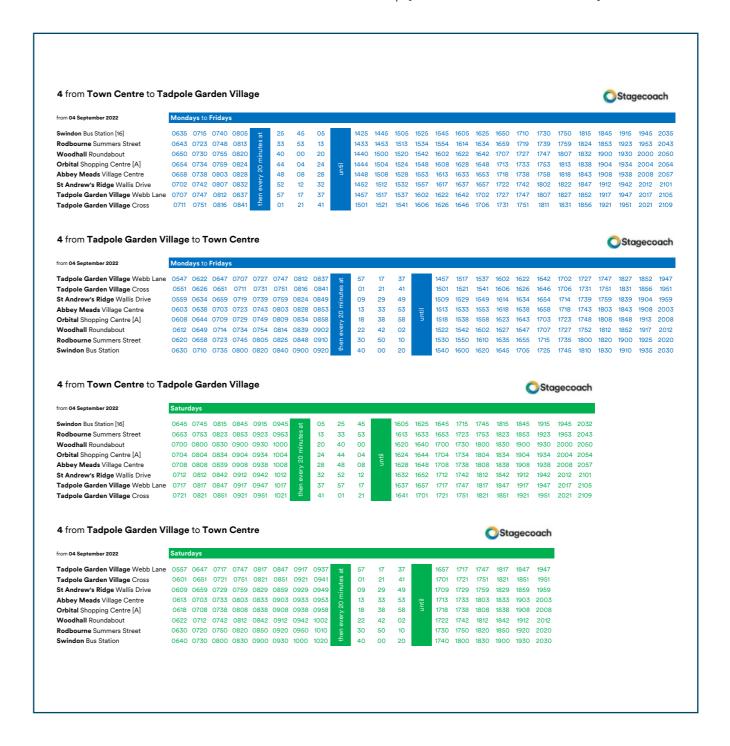
Pub

The Strawberry Thief is just 1.3 miles from Abbey Gardens.

Swindon Greyhound Stadium is just 0.4 miles from Abbey Gardens.

Public transport

The site is on a bus route with the nearest bus stop just 0.75 miles from Abbey Gardens.



Access statement

Highways

Access to the proposed development for pedestrians, cyclists and vehicles would be gained from the unnamed road that adjoins the site's eastern boundary.

The new road within the site is laid out as a Shared Surface to encourage low vehicle speeds and create an environment in which pedestrians can walk without feeling intimidated by motor traffic. Visibility splays would be provided at the new junction commensurate with the measured speed of vehicles on the main road to ensure that there would be adequate intervisibility between vehicles on the new shared surface road and the existing public highway.

Drainage and flood risk

The Environment Agency's Flood Map for Planning shows that the site falls entirely within Flood Zone 1, which has the lowest probability of flooding.

A sustainable drainage strategy, involving the implementation of SuDS is proposed for managing the disposal of surface water run-off from the proposed development on the site. Based on the underlying soil characteristics, it is considered that the use of soakaways would provide a suitable means of draining surface water run-off from development on the site.

All new driveways would be constructed as pervious pavements, which would contribute to the pollutant removal capability of the SuDS management train and improve the quality of the run-off.

The proposed drainage strategy would ensure that surface water arising from the developed site would be managed in a sustainable manner to mimic the surface water flows arising from the site prior to the proposed development, while reducing the flood risk to the site itself and elsewhere, taking climate change into account.

There is an existing public foul sewer located to the north of the site in Lady Lane that would provide a suitable outfall for foul flows arising from the proposed development. The main foul water sewers serving the proposed development would be the subject of an Agreement under Section 104 of the Water Industry Act 1991 to secure their future adoption as public sewers.

Parking arrangements

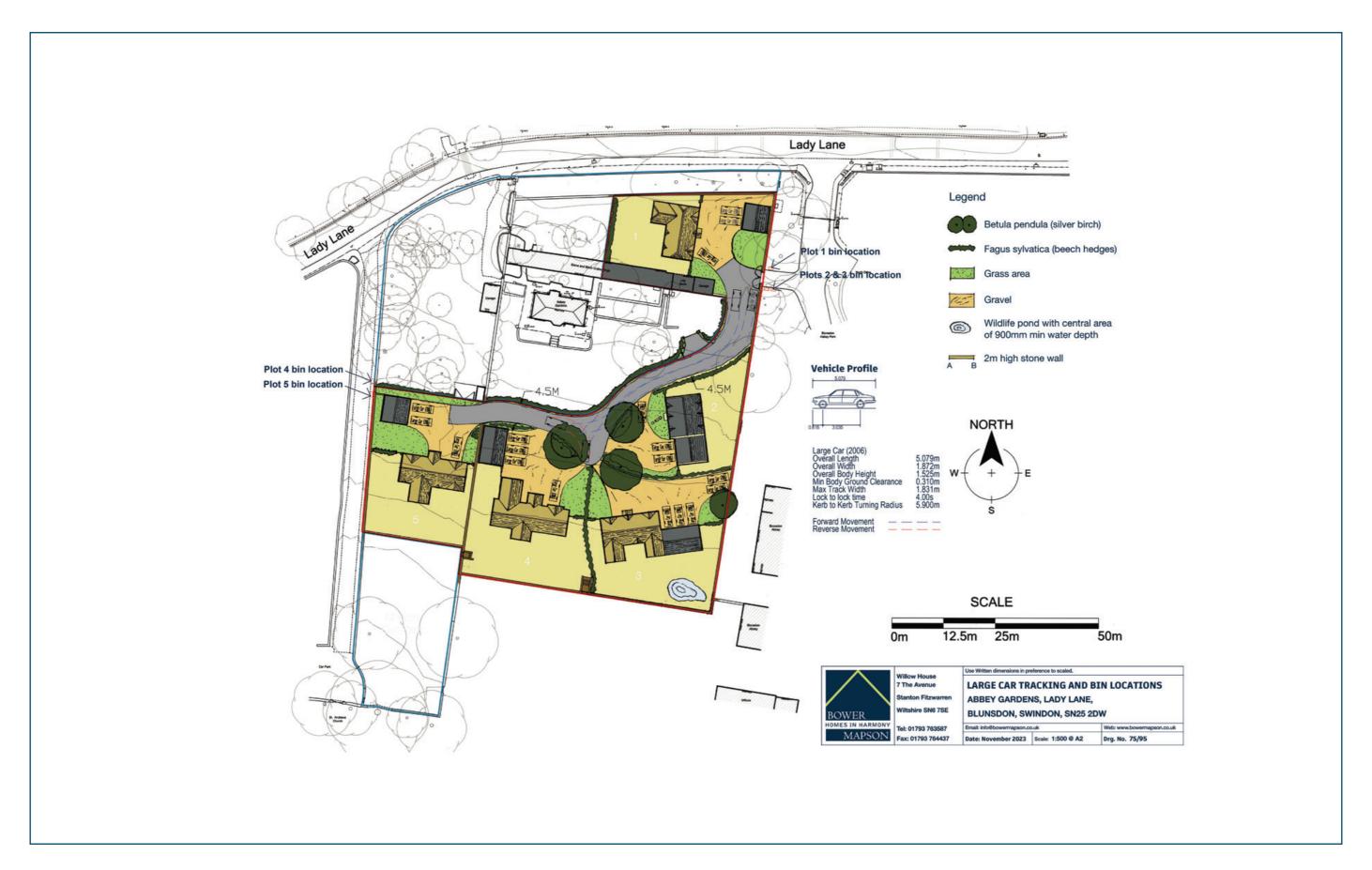
Allocated parking on a per plot basis.

Plot No	Garage	Car parking	
1	Double	5 spaces	
2	Double	5 spaces	
3	Triple	8 spaces	
4	Triple	7 spaces	
5	Double	5 spaces	

This level of provision for accommodating vehicles on site ensures there will be no need for any new resident or visitor to park outside the site on Lady Lane.



Access statement















Earlier developments in and around Swindon



Bower Mapson Homes Limited

Willow House, 7 The Avenue, Stanton Fitzwarren, Swindon SN6 7SE **T:** 01793 763587 **F:** 01793 764437 **W:** www.bowermapson.co.uk