



ECO CHURCH MANAGEMENT PLAN 2023

By Elizabeth Trice MSc.

AIM –

The aim of this report is to set out a plan of action regarding the conservation and care of the churches surrounding green spaces/ gardens.

OBJECTIVES –

The objectives of the report are to outline the current and future projects proposed to be conducted to improve these green spaces. To set a budget plan for these projects and to a set time scale for each project, with an annual review scheduled.

CONTENTS –

Brief overview of sites location	1
Church history	3
Map of Church Site	4
Map labelling 6 spaces	5
Church approach management plan	6
Memorial garden management plan	7
The Magpie Centre garden management plan	9
Strip alongside the hall management plan	11
Strip alongside the church building management plan	12
Prayer space management plan	13
Locations of projects across the 6 green spaces	14
Key points to remember when planting	17
Budget plan	18
Time scale projections	23

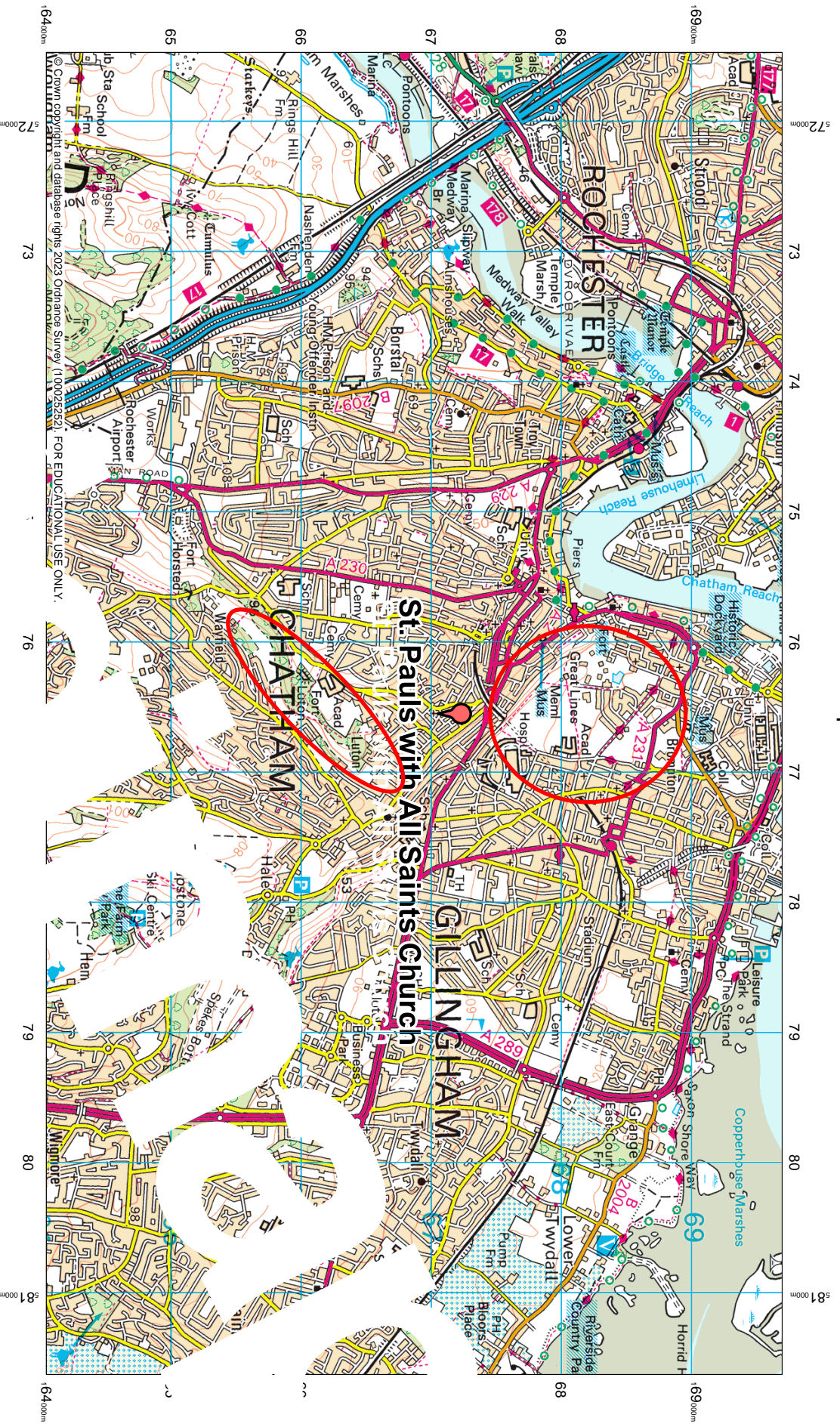
For more information	24
References	25
Appendix – Barrel pond set up example	29
Bird box and hedgehog house in detail	31
Building a bug hotel example	33
Planting trees and hedgerow	
Acknowledgements	36

Brief Overview of sites location –

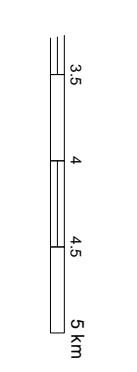
St Pauls with All Saints church, is located within the town centre of Chatham and the Medway towns, on Magpie Hall road, ME4 5NE. The church is situated in the middle of a highly urbanised area, historically opposite to All Saints hospital. Which after a serious fire in 1998 closed down in 1999 before being developed into a housing estate in 2000. The church is surrounded with a few highly managed green spaces, including the Great Lines heritage Park (a network of open green spaces in the Medway towns, currently managed by Medway Council) and Luton Rec (the green space located next to Fort Luton) (Medway Council, 2023). These green spaces are circled in the map below, showing lack of connectivity between these sites and others in the surrounding area.

The Key hope of this project is to bring community wide awareness of these factors and the climate crisis that is unfolding around the world. As stated previously in the objectives above our first step is to try and create a biodiverse habitat patch that species use as stepping-stone between the managed green spaces.

Location map of Church



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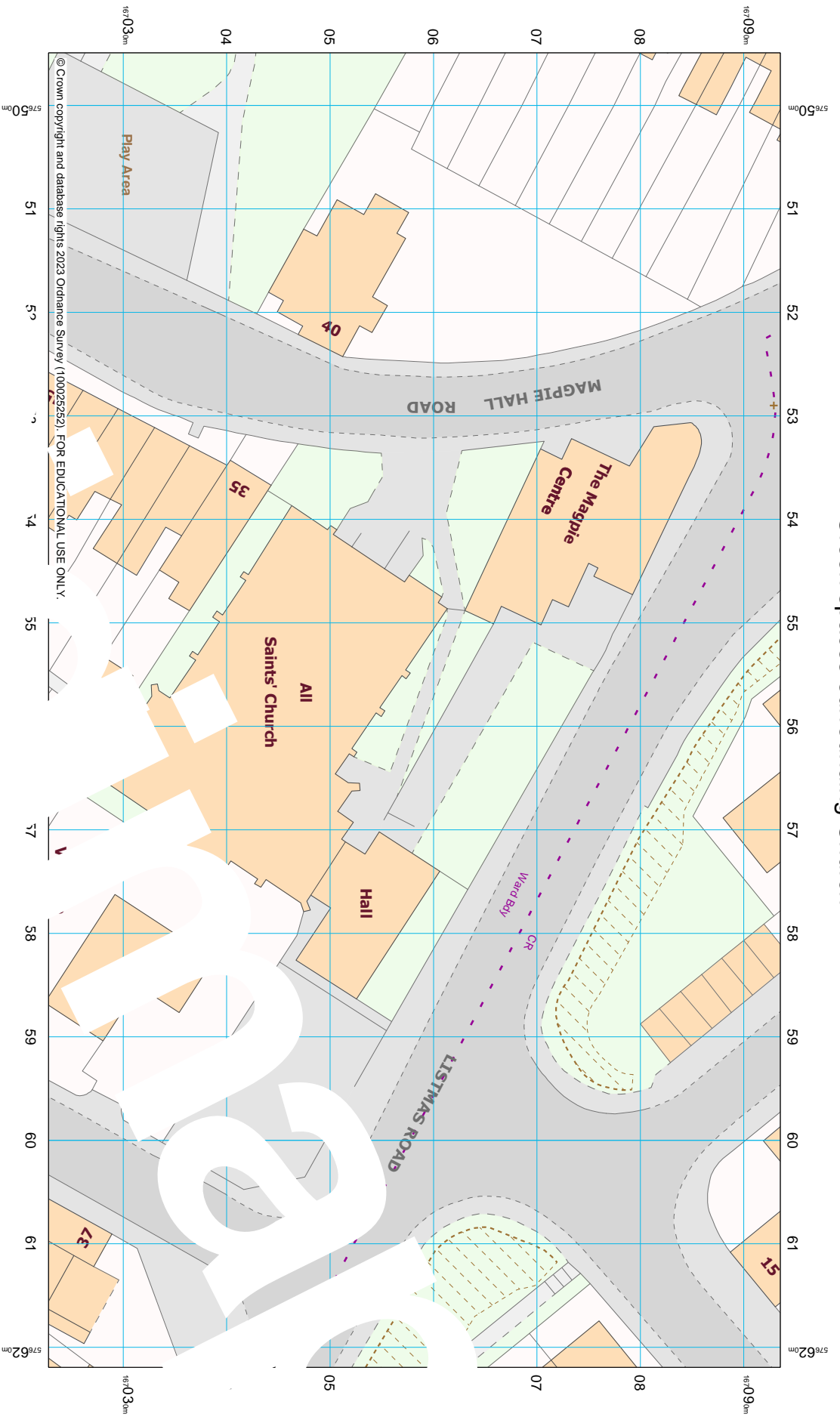
Church History –

St Pauls with All Saints church and it's surrounding parish is part of Rochester Diocese, within the Church of England denomination. The church building itself was built between 1913-14, designed by a local architect Edward Bond, who designed a number of local churches in the area. He had a specialty of designing churches that would be situated on steep inclines, just like this one. The Church was dedicated in 1914 as All Saints Church, with its first baptism taking place later that year. In 1974 the Parish was renamed St. Paul's with All Saints, when the Victorian church of St. Pauls down the road was demolished to improve traffic flow merging the two parishes together. Since then there has been a number of changes within the church and the parish, including its population and congregation size. Today the church is now situated in the most deprived parish in Rochester Diocese. In response to this issue the Magpie centre was created, using the Magpie Tavern pub building. The site now has a fully functioning café, food bank and spaces for hire on the first floor. There is also a computers to use with free WIFI (John E. Vigar's Kent Churches, 2023).



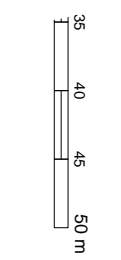
Plate 1 – side view of church, from the end of Magpie Centre garden, near the church hall. (St Pauls with All Saints, 2023).

Green spaces surrounding Church



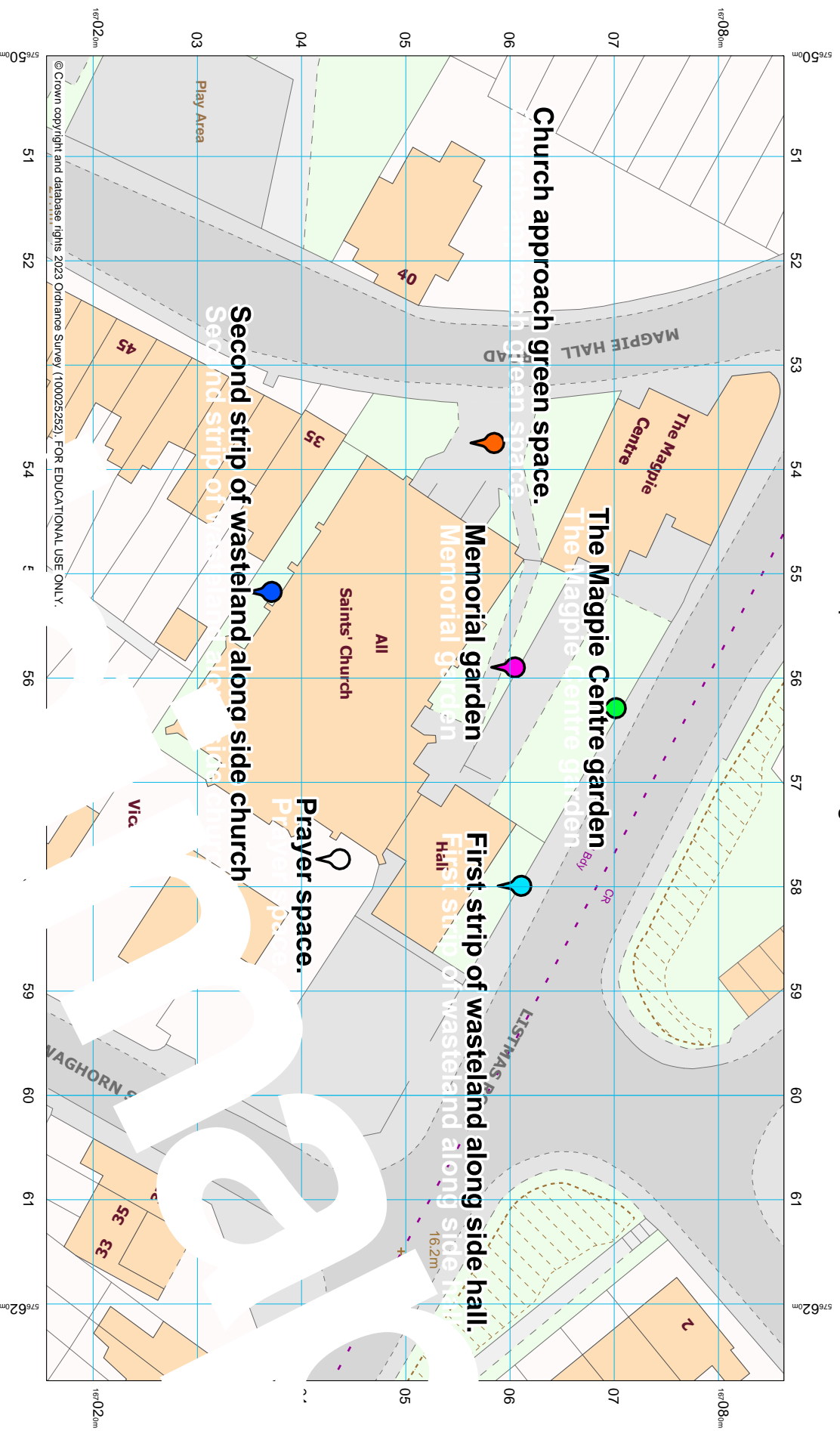
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Green spaces surrounding Church



Church approach management plan –

The church approach green space is split into two by a concrete path used as a disabled carpark and entrance into the church. This area is made up of highly managed grassland, with a cross shaped flower bed in the left grass patch, near the wall of the magpie centre, below the church tower. The area is approximately 21 metres in width and between 6 and 14.5 metres in length. The area of this space is approximately 243 m² including car parking space.

Previous work and care –

Very little conservation work has previously been conducted on this area apart from the care and maintenance required to manage the length of the grass and keep the area neat and tidy. The only natural feature which has been added in recent years to this area is the cross shaped flower bed, which is currently planted with bulbs that return annually.



The Woodland Trust is offering
FREE TREES
for communities, groups and schools!



Plate 3. Do you have space to plant free trees?(Eco congregation Scotland, 2023).



Plate 2 – Church Approach from across the road (a church near you, 2023).

Future Projects and planning –

As this green space is at the front of the Church, the management is likely to be altered to consider look from the road.

Therefore the proposed project for this area is the planting of 2 or 3 fruit trees to increase the spaces biodiversity and provide a fruit for wildlife to eat (*again this is dependant on PCC approval*).

Species suggested for the church is Crap apple tree and Bird cherry tree as they attract wildlife and will survive in this area's conditions. These saplings will hopefully be acquired through the woodland trust's free trees scheme. (*see appendix for information on planting and caring for trees*).

(Woodland Trust, 2020a).

Memorial Garden management plan –

The memorial garden is a small green space located between the church and The Magpie Centre. The green space is approximately 4 to 6 metres wide and 17 metres in length. The area is planted with a number of rose bushes, common flowers, creepers and weeds. The area of this space is approximately 113.6 m² (including patioed path and concreted ramp allowing disable access to the space from the church and church hall).

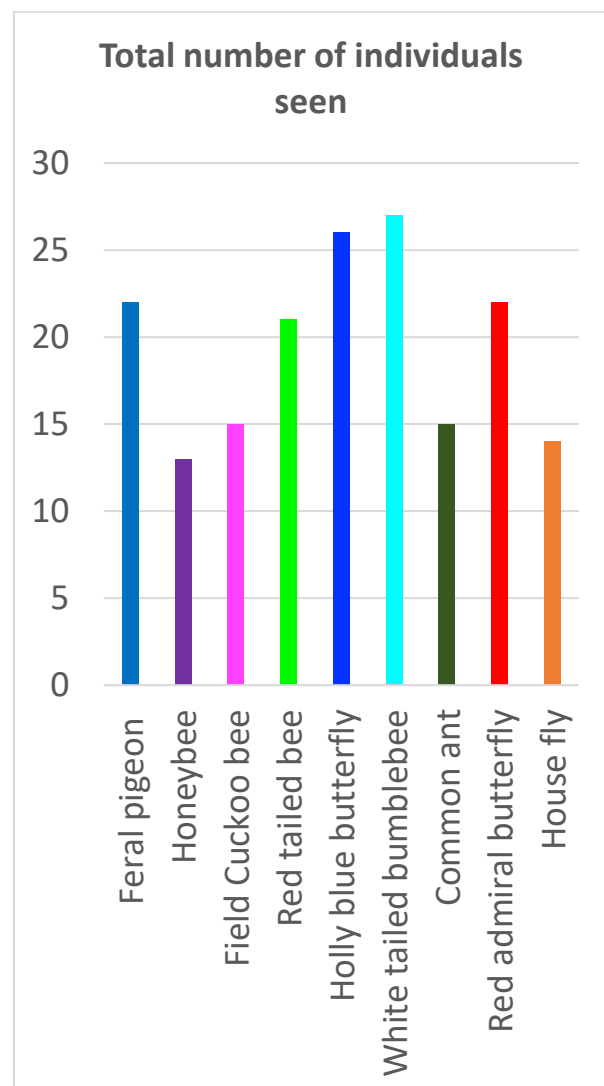


Plate 4 – view of memorial garden 6th June 2021, at start of survey.

Previous survey –

The survey was conducted 6th to the 12th June 2021. Recording the abundance of both species and individuals of each species within an hour. The results of the survey recorded 29 different species within this space over 6 days. The results shown in the figure to the left show the 8 most common species, seen more than 10 times over this time period.

Majority of these species were seen less than 3 times throughout the survey with 7 species (out of 29) only being seen once.



Previous improvements from survey results –

A report was submitted to PCC (Parochial Church Council) with suggestions to improve this green space –

- Increase the range of plant species.
- Alter management to allow native species to grow.

These improvements have been met with roses, lavender, cheery tree, bamboo and other perennials were planted between 2021-2022.



Plate 5 – view of memorial garden 19th February 2023, 18 months after improvements made (Trice, 2023).

Future Projects within this space –

There are two key projects for this Space –

The first is the continuation of count on nature survey, that will be conducted in June using the same method to assess whether the improvement achieved since the previous survey have impacted the biodiversity of species and number of individuals seen. Results of both studies will be analysed and a report will be written up.

The second will be the introduction of bird boxes and bat boxes to this space (if applicable and dependant on PCC approval and cost – see *budget plan*).

Monitoring of these projects will be conducted with minimal interruption from any individuals using or visiting boxes/ houses.

The Magpie Centre Management plan –

The Magpie Centre is the largest of the 6 green spaces located behind the Centre is currently a highly managed space (grass area mowed regularly), with a verge and planters. This space is approximately 10 metres wide and 32 metres in length. However this includes a small area that is concreted nearest the centre. The area of this space is approximately 298 m².

Previous planting working and reconstruction –

This area has undergone extensive reconstructive work within the last 5 years, due to the boundary wall to the site falling down, causing a landslide in early January 2016.

When the Magpie Centre was opened planters were placed lining either side of the garden. Within these planters' tomatoes, sun flowers and other vegetables were grown. However many of these planters were lost when the wall collapsed. Since then the few planters that remain have been used to grow a limited amount of vegetables, green beans being the most successful.



Plate 6 – collapsed boundary wall mid-January 2016 (Kent online, 2023).



Plate 7 – view of magpie centre garden currently, from hall steps (Trice, 2023).

Future projects and planting –

The future projects for this area include restarting a gardening group to look after the remaining planters and to add more if planters to improve diversity of fruit and vegetables that are grown here.

Another project is to add a bug hotel in the south east corner of the space. In order to encourage more wildlife and improve diversity of this area. Research into easy build kits could be used as safe education tools with Scouts/ or in Sunday school session. As well as collecting scrap wood and bits to build a long-standing bug hotel (*See appendix for more information*).

A final project that is being proposed is to create a compost pile on the boundary line, which is currently being fenced, from the wasteland strip along the side of the hall, seen in the image above (Plate 6).

Strip alongside the hall management plan –

The wasteland strip of green space alongside the hall is approximately 14.5 metres in length and 3 to 4 metres in width. The area of this space is approximately 48.5m². The space is made up of overgrown weeds, brambles and several unknown species bushes.

Previous work and care –

This space has been previously cleared and replanted, within the early 2010's. However continued management of this space was not kept up, leading to overgrowth and accumulation of rubbish over the years.

When the wall collapsed in 2016 this area had a land slide. When repairs were completed the area was leveled and turfed, the remains seen in plate 8. However again the site was not managed correctly, causing overgrowth of weeds and brambles stopping the grass and embedded flower seeds to germinate.

Furthermore this area has been neglected by the general public as it can be easily accessed from the car park, has been trampled several times and litter continues to be thrown into this area.



Plate 8 – view of wasteland strip from steps leading up to prayer space garden behind the church and hall (Trice, 2023).

Future projects and Planning –

The key project for this area space is to continue previous work clearing the area of overgrowth and rubbish, before replanting the area with specially chosen species. That will not only improve the area's biodiversity, but also require minimal care, allowing this project to have a low-level amount of management within the future (e.g. weeding and strimming when needed), giving the area back to nature. (See pages 17 & 24 for more information).

A number of smaller projects will be conducted in this area –

The first project will be to introduce bird boxes, either attached to the wall of the hall and on to posts

erected at a height dependant on the species it is for.

The second project will be the creation of a compost heap along the fence line between this green space and the magpie centre garden, allowing the heap to be accessed from this area and be used in the planters.

The final project for this area will be the planting of a hedgerow to line the space, giving not only shade and shelter, but also food and nesting space. The saplings will again be acquired by the Woodland Trust's Free Trees scheme and will be delivered in November ready for winter planting, some of these saplings will go to church Approach. *(See appendix for more information on scheme and information hedgerow care).*

The pack we have chosen is Hedge, which will give a shelter, food and is easy to care for.

(Moore, 2022; Woodland Trust, 2023d).



Hedge

Make a natural screen or connect existing woodland to help wildlife stay on the move. You will get a variety of each species for 8 metres of full, easy to manage hedging.

For a longer length, our Wild Harvest, Year Round Colour, Wildlife, and Wild Wood packs also make great hedgerows and are available with 105 or 420 saplings.

- Trees: 30
- Species: dog rose, hawthorn, hazel, crab apple, dogwood
- Size of land: 6-8 metres of double-row hedging

Plate 9 – image of hedge tree pack (Woodland trust, 2023d).

Strip alongside of the Church management plan –

This wasteland strip is the one of the smallest green spaces the church owns. This green space is approximately 34 metres in length and between 1 metre and 7 metres in width. The area of this space is approximately 86.4m². This area is also has the least amount of sunlight and reduced access, only through the vicarage garden.

Previous work and care –

Very little work has previous been conducted on this green space. Some management has been conducted e.g. strimming and weeding, to stop overgrowth. However this management was only conducted recently.

A brick wall has also been constructed at the front of this space, to deter trespassers from trampling this space. However this has altered the ability of terrestrial species movement between this area and the other church green spaces. There is little work that can be done to alter this as it is a security risk, but there is still ability for a range of birds, insects to move across. As well as an ability of terrestrial mammals to use the vicarage garden to connect to the other spaces around the side of the church e.g. prayer space/ garden.



Plate 10 – view of wasteland strip along the side of the church (Trice, 2023).

Future projects and planning –

The first project that is being proposed is the introduction of a hedgehog house to attract hedgehogs to hibernate here, as it is also secluded and sheltered.

The second is to introduce a bird box into this space. Again this will either be placed on the wall of the church or on a post if wall placement is applicable.

The final project that is currently proposed for this site is the creation of a bug hotel, that will hopefully be placed near the front of the church.

Prayer space management plan –

The prayer space is the smallest green space owned by the church made up of small area of grass, with a bird bath in the centre. This space is approximately 2.5-3 metres in length and 3 metres in width. The area of space is approximately 10m².

Previous work and care –

Once again this green space has had very little conservation work completed in it. The grass is consistently maintained by being mowed.

A bird bath has also been placed in the centre of the space, along with two benches allowing the church community to sit and pray here.



Plate 11 – view of prayer space garden (Trice, 2023).

Future projects and planning –

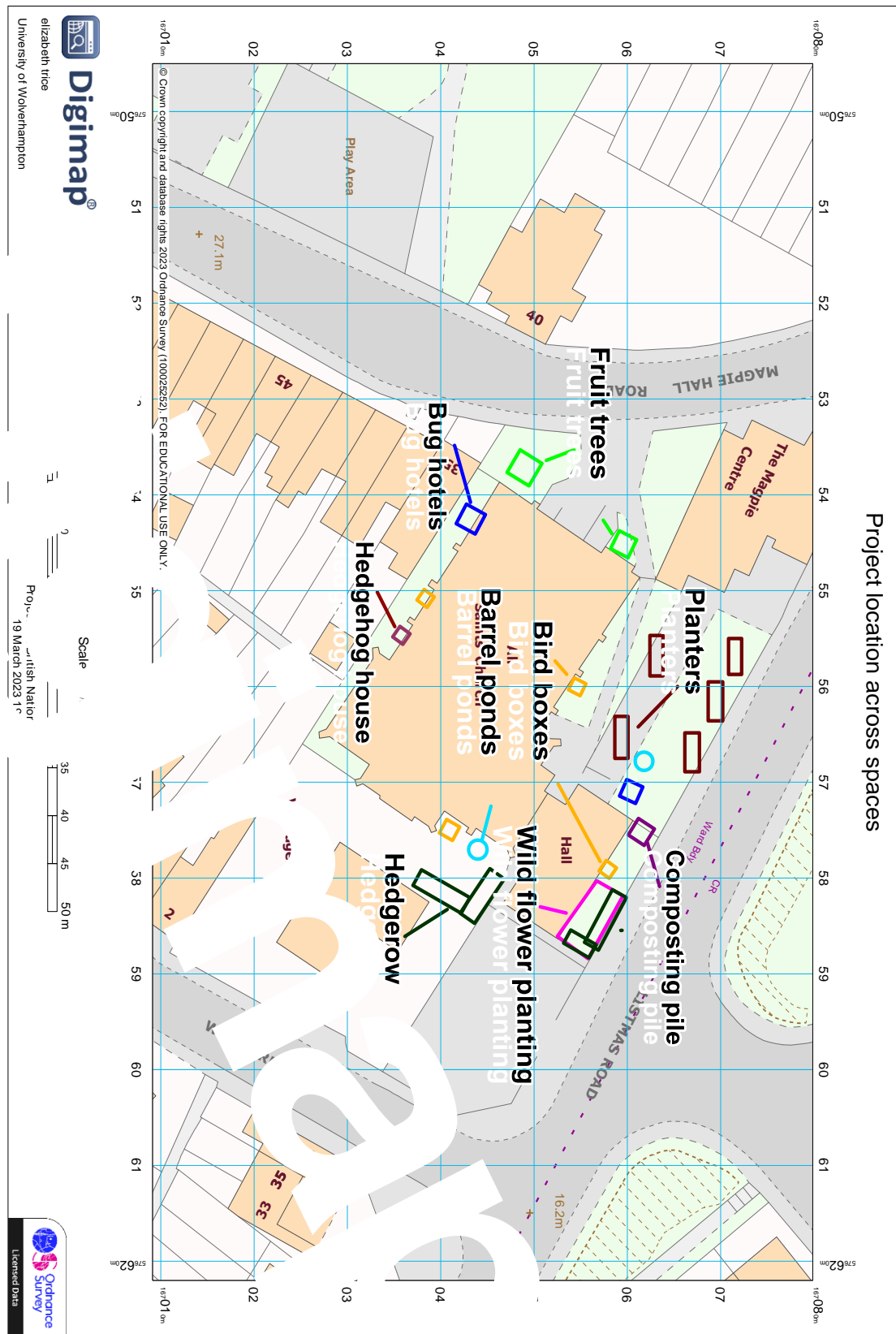
There are currently three proposed projects for this site. The first will be the placement of bird boxes

attached to fencing and posts around the area.

The second project will be to place a barrel pond in the corner of the garden to boost biodiversity. The barrel will be placed in this area out of direct sunlight to ensure that algae blooms do not become a problem.

The final project for this space will be the creation of a thin hedgerow following the fence line seen in plate 10, to reduce the noise pollution within this space and give birds and insect the ability to nest away from the main roads at the front and side of the church.

Location of projects across 6 green areas –



Key: Pink – wildflower planting, Blue – bug hotels, Dark Green – hedgerows, Brown – planters, Purple – Composting pile, Light Green – fruit tree planting, Red – Hedgehog house and Yellow – bird boxes.

The current locations of these projects are subject to PCC approval, impact to accessibility of green space, costing of each project and viability of these projects working in the areas they are currently placed. These locations will be reviewed once approval is gained and a detailed plan will be written on each project. Particularly in regard to community engagement and project completion dates.

The map also includes projects already underway e.g. planters and the compost heap/ bins. However the details of these projects, such as start date and introduction are yet to be confirmed.

Key points to remember when planting –

Point 1 – The size of the space doesn't necessarily matter.

Gardens and green spaces of all sizes even balconies and windowsills can have an impact. It is all dependant on what is planted in these spaces. However remember not all plants like the same conditions e.g. some will need full sun, part shade and full shade. Some are perennial, deciduous, evergreen and hardy.

Point 2 – A diversity/ larger range of species the better.

A mixture of berry plants and seed-bearing perennials especially will improve the space and make more attractive to both birds and insects.

Point 3 – Layering is highly important!

Ensure that what is planted isn't all flowers, grasses or trees of the same height, even if they represent a large range of plant species. Animals, birds and insects like to have altering habitat. With trees and bushes for shelter, flowers and grasses for food.

- *Maybe write up a check list to ensure you have a wide enough variety.*

Point 4 – think like the animals you are trying to cater for.

Try to give them appropriate shelter, food and access to water if possible. e.g. butterflies and insects are highly attracted to herbs, as they are often long flowering plants. (e.g. chives, mint, marjoram and thyme).

Point 5 – Try to plant for all four seasons.


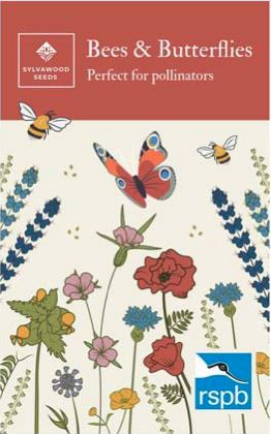
Even though insects are most active spring to early autumn, insects will fly around if the temperature is over 10 degrees even in the winter. So early and late flowering plants are especially important.

Point 6 – Bees see blue, yellow and green.


The flowers that are most attractive to bees are ones that are blue, violet, purple and white. Red flowers on the other hand are seen as black and unattractive.





(Moore, 2022; Moore, 2020; Lewis, 2018).

Budget Plan –

Project –	Current estimated cost –	Design –	Overall project cost –
<p>Bird box project –</p>	<p>£15 per box (for design to the left).</p> <p>Current project is for 4 bird boxes = £60.</p> <p>However other model prices may vary. Dependant on PCC approval and choice of budget (from between £8-£30).</p>	 <p>(RSPB, 2023a).</p>	<p>£60</p>
<p>Wildflower planting project –</p>	<p>Seed packets £6 per packet.</p> <p>Current deal on RSPB website is 2 packets for £10.</p> <p><i>(Other brands can be used but should be researched and trusted source like RSPB).</i></p>	 <p>(RSPB, 2023e).</p>	<p>£20-24 <i>(with or without deal).</i></p>

<p>Hedgehog house project –</p>	<p>£35 per house. Current project is for 1 hedgehog house.</p>	 <p>(RSPB, 2023c).</p>	<p>£35</p>
<p>Composting project –</p>	<p>£29 (<i>per panel</i>) and £10-18 fence post (<i>per post</i>)/ £2.50-£2.99 - Used wooden pallets. £49.99 or £99.99 – for premade compost box.</p>	   <p>(Wickes, 2023; B and Q, 2023; Primrose, 2022).</p>	<p>For fence and post compost bin – £156-188. For used wooden pallets and posts –£50-83.96.</p>

<p>Bug hotel project –</p>	<p>Free – £9.95-46.50 (<i>Baker Ross design depending on number pack of 2 or pack of 10</i>).</p>	 <p>(Baker Ross, 2023).</p>	<p>£46.50.</p>
<p>Planter project –</p>	<p>Free or on commission /£17-145.</p> <p>There is currently a deal for 320x320x320m m planters 2 for £25.</p>		<p>£17-145.</p>

<p>Water source/ barrel pond –</p>	<p>Barrel – £20-£100 – dependant on size,</p> <p>RSPB pond liner – £25-£60.</p> <p>Oxygenating Plants – £26.99.</p>	   <p>(Esty, 2023; RSPB, 2023f; World of water, 2023; Amazon, 2023b).</p>	<p>£71.99-186.99.</p>
<p>Plants to improve biodiversity (within planting project) –</p>	<p>Buddleia plant – £20-30 per plant.</p> <p>Crab apple tree – £10.95 (<i>per plant</i>).</p>		<p>£41.90-51.90.</p>

	<p>Bird cherry tree – £10.95 (per plant).</p>	 <p>(Wikipedia, 2023; Woodland Trust, 2023b; Woodland Trust, 2023c).</p>	
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Total estimated cost of all projects combined =

£342.39-633.35 (with wooden pallet prices).

£452.39-737.39 (with Fence panel prices).

These estimates were totalled at the start of February 2023 so some prices may have altered.

Furthermore this does not include our outreach projects and community days we plan to hold in in the future (as we need talk to the community project lead).

Time scale projections –

Months	Targets/ work to complete –		
January	Set up eco group.	Plan projects for the next year.	Write up and present management plan for 2023.
February	Hand management plan over to PCC.		
March	PCC meeting where budget and projects are to be approved.	Launch of Eco Project.	
April	Start approved projects with approved budget.		
May	Continue work on projects.	Start setting up Sunday school events focusing on wildlife/ working with scouts.	
June	Survey memorial garden and collate data.	Continue to work on and lead/ help Sunday school events.	Continue projects.
July	Continue projects.	Our reach/ fund raising events.	
August	Survey completed projects/ review short term impacts.		
September	Mow area's that do not have annual planted blubs.		
October	Harvest service.		
November	Protect Our Planet Day (10th), have a service on 5 or 12th on this theme.		
December	Start management plan for the next year.		

For more information –

23

Buglife – Pollinator projects – <https://www.buglife.org.uk/our-work/pollinator-projects/>

Eco Church – Encouraging Birds – https://ecochurch.arocha.org.uk/wp-content/uploads/2021/10/Land1_2-Encouraging-birds.pdf

Eco Church – Encouraging Moths and Butterflies – https://ecochurch.arocha.org.uk/wp-content/uploads/2021/10/Land1_5-Encouraging-moths-and-butterflies.pdf

Eco Church – Encouraging Native Wildlife – <https://ecochurch.arocha.org.uk/wp-content/uploads/2021/10/Land1-Encouraging-Native-Wildlife.pdf>

Eco Church – Plants for Pollinators – <https://ecochurch.arocha.org.uk/wp-content/uploads/2021/10/Land3-Plants-for-pollinators.pdf>

RSPB – How to attract hedgehogs to your garden – <https://www.rspb.org.uk/birds-and-wildlife/advice/gardening-for-wildlife/homes-for-hedgehogs/>

RSPB – Make a bird nest box – <https://www.rspb.org.uk/globalassets/downloads/kids--schools/making-a-nestbox-activities.pdf>

Wildlife Trust – Plants for Pollinators – <https://www.wildlifetrusts.org/actions/plant-flowers-bees-and-pollinators>

Woodland Trust – How and when to plant fruit trees – <https://www.woodlandtrust.org.uk/blog/2020/11/planting-fruit-trees/>

References –

24

A church near you (2023) St Paul with All saints Chatham. Available at: <https://www.achurchnearyou.com/church/9921/> (Accessed: 19th January 2023).

Amazon (2023a) All pond solutions EF External Filter Booster Supplementary Canister, 1.2 Litre. Available at: https://www.amazon.co.uk/All-Pond-Solutions-External-Supplementary/dp/B00B00UUIK/ref=asc_df_B00B00UUIK/?tag=googshopuk-21&linkCode=df0&hvadid=241267871461&hvpos=&hvnetw=g&hvrnd=3634625706311648991&hvppone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=1006618&hvtargid=pla-421500742930&psc=1 (14th January 2023).

Amazon (2023b) Pond liner 25 year guarantee pond lining 2.5 x 2.5. Available at: https://www.amazon.co.uk/Pond-Liner-Year-Guarantee-Lining/dp/B07BYSQN32/ref=asc_df_B07BYSQN32/?tag=googshopuk-21&linkCode=df0&hvadid=309954725885&hvpos=&hvnetw=g&hvrnd=16729361033110776116&hvppone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=1006618&hvtargid=pla-698768696521&th=1 (Accessed: 14th January 2023).

Baker Ross (2023) Wooden bug hotel kits. Available at: https://www.bakerross.co.uk/wooden-bug-hotel-kits?utm_campaign=PMax-Zombies&gclid=CjwKCAiAzp6eBhByEiWA_gGq5Cg2qUsb5K-WMFlkmlf3svQVvDcOvLE0opkS8xoFpMMO4FAzOn5YPhoCl-UQAvD_BwE (Accessed: 15th January 2023).

BBC (2023) Breathing places – give hedgehogs a home. Available at: https://www.bbc.co.uk/breathingplaces/hedgehog_home/ (Accessed: 19th January 2023).

B and Q (2023) fence post. Available at: <https://www.diy.com/search?term=fence+post> (Accessed: 20th January 2023).

B and Q (2023) fence panels. Available at: <https://www.diy.com/departments/outdoor-garden/fencing/fence-panels/DIY585890.cat?Price=5..10&Price=20..30> (Accessed: 21st January 2023).

BBC Gardeners World Magazine (2021) How to build a compost bin. Available at: <https://www.gardenersworld.com/how-to/diy/how-to-build-a-compost-bin/> (Accessed: 21st January 2023).

25

Countryfile (2023) The best hedgehog houses for your garden. Available at: <https://www.countryfile.com/wildlife/mammals/best-hedgehog-houses/> (Accessed: 19th January 2023).

Eco Congregation Scotland (2023) Do you have space to plant free trees? Available at: <https://www.ecocongregationscotland.org/news/do-you-have-a-space-to-plant-free-trees/> (Accessed: 17th march 2023).

Esty (2023) Oak whiskey barrel water tight pond water feature. Available at: <https://www.etsy.com/uk/listing/1362658449/oak-whiskey-barrel-water-tight-pond?gpla=1&gao=1&> (Accessed: 14th January 2023).

John E. Vigar's Kent Churches (2023) All Saints Chatham. Available: <https://kentchurches.info/church.asp?p=Chatham8> (Accessed: 18th February 2023).

Kent Online (2023) Two-year wait to rebuild collapsed boundary wall in Listmas road, Chatham. Available at: <https://www.kentonline.co.uk/medway/news/wall-still-not-repaired-after-158721/> (Accessed: 14th January 2023).

Lewis W. S. (2018) *Planting for Honeybees*. 4th edition. Quadrille. London.

Medway Council (2023) Great Lines Heritage Park. Available at: https://www.medway.gov.uk/directory_record/467/great_lines_heritage_park (Accessed: 19th February 2023).

Moore J. (2022) *Planting for Garden Birds*. 1st edition. Quadrille. London.

Moore J. (2020) *Planting for Butterflies*. 1st edition. Quadrille. London.

Primrose (2022) Easy-load wooden compost bin – large – 719 litres – by Lacewing. Available at: <https://www.primrose.co.uk/easy-load-wooden-compost-bin-large-718-litres-by-lacewingtm?source=googleads&gclid=CjwKCAiA2rOeBhAsEiwA2PI7Q2hIx33qA>

bPmKx2JZUASxWZKHWvjJDvlzMgVNqzjg-N-hEnQ4IfwhBoCyHoQAvD_BwE
(Accessed: 21th January 2023).

RSPB (2023a) Garden bird nest boxes. Available at:
<https://shopping.rspb.org.uk/bird-feeders-boxes-tables/bird-houses-nest-boxes/garden-bird-nest-boxes/> (Accessed: 14th January 2023).

RSPB (2023b) Build a bug hotel. Available at: <https://www.rspb.org.uk/get-involved/activities/nature-on-your-doorstep/garden-activities/build-a-bug-hotel/> (Accessed: 19th January 2023).

RSPB (2023c) Hedgehog house. Available at:
<https://shopping.rspb.org.uk/wildlife-friendly-garden/wildlife-habitats/hedgehog-houses/> (Accessed: 14th January 2023).

RSPB (2023d) Making a nestbox. Available at:
<https://www.rspb.org.uk/globalassets/downloads/kids--schools/making-a-nestbox-activities.pdf> (Accessed: 19th January 2023).

RSPB (2023e) Wildflower seeds for pollinators. Available at:
<https://shopping.rspb.org.uk/wildlife-friendly-garden/gardening/seeds-for-planting/> (Accessed: 14th January 2023).

RSPB (2023f) RSPB Pond liner kits. Available at:
<https://shopping.rspb.org.uk/wildlife-friendly-garden/gardening/rspb-pond-liner-kits.html> (Accessed: 17th January 2023).

St Pauls with All Saints (2023) St Pauls with All Saints. Available at:
<https://stpaulwithallsaints.org.uk/im-new-here/location-and-parking/>
(Accessed: 18th February 2023).

The happy gardening life (2023) How to Compost in 6 Easy Steps. Available at:
<https://thehappygardeninglife.com/blogs/organic-gardening/how-to-compost-in-6-easy-steps> (Accessed: 21st January 2023).

Wickes (2023) Wickes dip treated overlap fence panel – 6 x 3ft. Available at:
<https://www.wickes.co.uk/Wickes-Dip-Treated-Overlap-Fence-Panel---6-x-3ft/p/540050> (Accessed: 21st January 2023).

Wildlife Trust (2023) How to compost your waste. Available at: <https://www.wildlifetrusts.org/actions/how-compost-your-waste> (Accessed: 21st January 2023).

Woodland Trust (2020a) How and when to plant fruit trees. Available at: <https://www.woodlandtrust.org.uk/blog/2020/11/planting-fruit-trees/> (Accessed: 19th January 2023).

Woodland Trust (2023b) Bird cherry (*Prunus padus*). Available at: https://shop.woodlandtrust.org.uk/bird-cherry?gclid=CjwKCAiA2rOeBhAsEiwA2PI7Q8mgGrpTKa4oSwyEWwfVe7pu00wMOJauibcRUK4NQdt-LbmsHZ9VVhoCfK8QAvD_BwE (Accessed: 21st January 2023).

Woodland Trust (2023c) Crab apple (*Malus sylvestris*). Available at: https://shop.woodlandtrust.org.uk/crab-apple?gclid=CjwKCAiA2rOeBhAsEiwA2PI7Q2kdZdAPkOcl79J20cMgFsgloDOFf7jwjtfkwYyyJBd-yWW5bV3O4RoCTUIQAvD_BwE (Accessed: 21st January 2023).

Woodland Trust (2023d) Free trees Schools and communities. Available at: https://www.woodlandtrust.org.uk/plant-trees/schools-and-communities/?utm_source=google&utm_medium=cpc&utm_campaign=community_tree_packs&utm_id=ctp&gclid=CjwKCAiAu5agBhBzEiwAdiR5tLTXpr0xjKh_BMwqiz_yzHTK7ydS-1io2U65ATPecVMPd7-CD_FbKhoCpdwQAvD_BwE (Accessed: 7th March 2023).

World of water (2023) Oxygenating plant Collection. Available at: https://worldofwater.com/oxygenating-plant-collection/?gclid=Cj0KCCQiA8aOeBhCWARIsANRFRQGO9EP0fjA9yBI-wCSZ046JsxIO1Fq-a010DDgOLxdIEF42XI_4DmoaAlpQEALw_wcB (19th January 2023).

Appendix –

Barrel pond setup example -

7 steps to creating barrel pond

–

Step 1 – line the barrel and make sure it is water-tight.

Step 2 – set up shelving, creating several levels for a range of plant species and locate where of oxygenating plants are to be placed on different levels.

Step 3 – once secure, place a layer of aquatic compost on the different levels.

Step 4 – drill small hole near top of barrel large enough for filter pipe to fit through.

Step 5 – fill with water.

Step 6 – put plants back in locations.

Step 7 – set up filter.



Plate 8 – RSPB pond liner (RSPB, 2023f).



Plate 5 – bas barrel setup of a barrel pond (Etsy, 2023).



Plate 6 – oxygenating plants (World of water 2023).

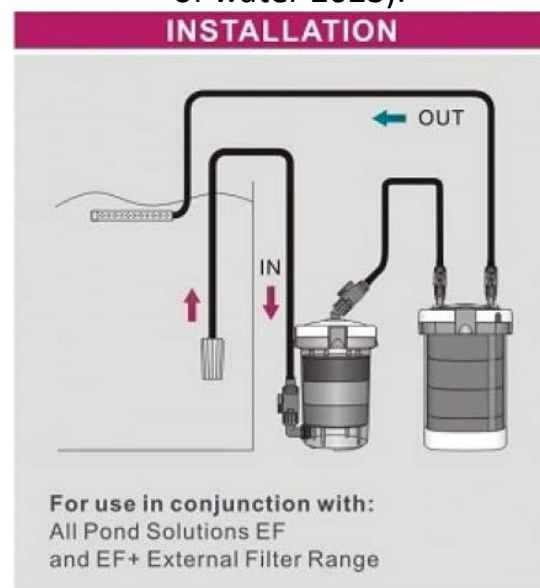


Plate 7 – filter set up (Amazon, 2023a).

Bird box and hedgehog house projects details –

The bird box and hedgehog house projects will be set up early Spring or Autumn 2023, once more depending on PCC approval.

Both the entrance hole size and height of where the box is placed will attract different bird species (*Which may suggest buying different designs or making a few bird boxes to increase the diversity of bird species that could use the boxes*).

- Coal tits, Marsh tits and Blue tits – 25mm across.
- Great tits and Tree sparrows – 28 mm across.
- Nuthatches and House sparrows – 32mm across.
- Starlings will need larger boxes with entrances 45 mm across.

For most species' boxes should be placed between 1-3 metres above the ground. However House sparrows and starlings like high placed boxes up under eaves. Boxes will be tilted forward to stop rain from getting into the inside of the box.

The boxes will be monitored on a regular basis (once every week or two depending on volunteers). Recording sheets will be made and data will be recorded on the number of individuals seen and the species

seen. All monitoring will be conducted without causing disturbance to boxes or houses.

The boxes will be cleaned out near the end of summer, before birds begin nesting again for the winter.

A non-invasive check of these boxes and house will also be conducted in mid-Spring before breeding and birds nesting in Spring.

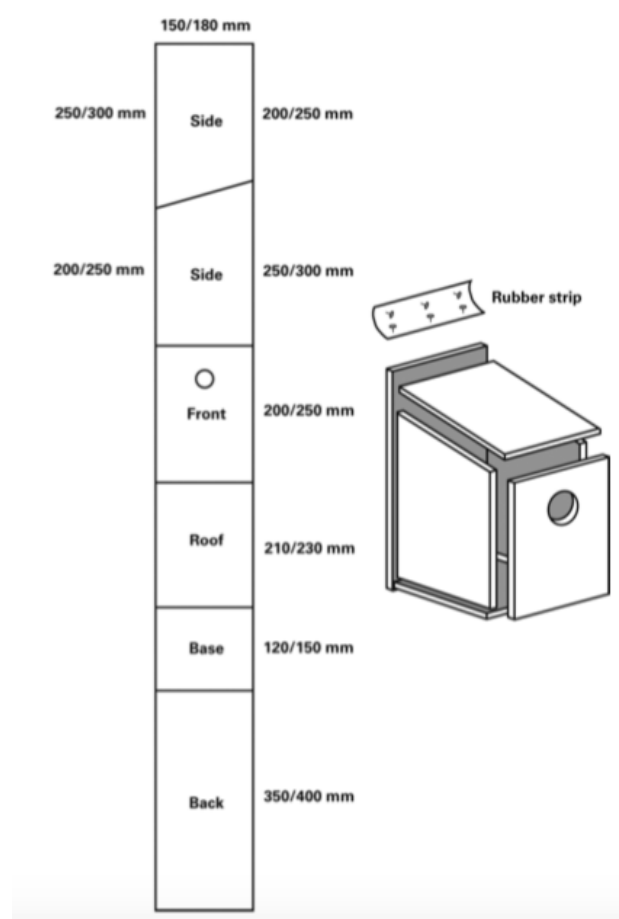


Plate 9 – bird box template with dimensions (RSPB, 2023d).

For more information on bird box setup and design for specific bird – [https://www.rspb.org.uk/get-involved/activities/nature-on-your-doorstep/garden-activities/homes-the-hole-story/?utm_source=notes on nature 20220218&utm_medium=email&utm_term=notes on nature&utm_content=1&utm_campaign=notes on nature](https://www.rspb.org.uk/get-involved/activities/nature-on-your-doorstep/garden-activities/homes-the-hole-story/?utm_source=notes_on_nature_20220218&utm_medium=email&utm_term=notes_on_nature&utm_content=1&utm_campaign=notes_on_nature)

The hedgehog house will be placed in a quiet, shady, sheltered and if possible dry area, surrounded with vegetation (*which this species particularly prefer*).

(Countryfile, 2023 and BBC, 2023).

Building a bug hotel –

The location of the bug hotel needs to be level and on firm ground, if it is free standing.

The bug hotel also needs to be a good distance away any planters or vegetable patches.

The location of the hotel will also likely impact the species that are attracted to it. As some species prefer certain conditions. Such as Solitary bees (*Osmia spp.*) who prefer sunny warm places, while wood lice (*Oniscidea spp.*) prefer less sun light and damper conditions.

A firm and stable framework is needed for any bug hotel some of the best materials are old wooden pallets and spare bricks with holes in them.

A range of materials can be used to create bug hotels including –

- Strips of wood.
- Straw.
- Moss.
- Dry leaves (*best for ladybugs*).
- Woodchip.
- Old terracotta pots.
- Old roofing tiles.
- Old logs.
- Bark (*best for beetles, centipedes, spiders and woodlice*).
- Soil.
- Hollow bamboo canes (*best for solitary bees*).

Key point when building a bug hotel is provide all sorts of different nooks and crannies, crevices, tunnels and cosy bits to hide in.



(RSPB, 2023b).

But remember to add a roof to keep it dry and warm for them in winter!



Build a contained compost pile/ heap example –

5 steps to build a compost heap –

Step 1 – clear and level the ground where the pile or heap is to be placed.

Step 2 – take the first wooden pallet or panel plant it where it meant to stand.

If you have a pallet push two stakes either end of the pallet through the to layers of wood and using a hammer to drive them firmly into the ground approximately 20-30 cm.

On the other hand if you have panel place fence post at the corners, driving them into the ground much like the stakes and sliding the fencing panel between them.

Step 3 – Position the 2 side pallets or panels sitting the corners tightly together to stop compost spilling through the gaps. And then following step 2 construct them like the first pallet or panel.

Step 4 – To keep the structure stable, wire the pallets together at each corner.

Step 5 – wire the last pallet or panel onto the front of the right side of pallet or panel to make a gate you can open when you want to fill it.

There are a number of points that need to be considered when constructing a compost pile/ heap –





Aim for between 25-50% of materials to be soft green materials (e.g. grass clippings, annual weeds and vegetable kitchen waste).

The remainder should be woody brown material (pruning, wood chipping, paper cardboard, straw and dead leaves).

To ensure the compost heap/ pile doesn't attract swarms of flies cover the kitchen waste with garden waste.

How to make your own compost

You will need:

- a shady spot where a heap will stay moist
- some old bricks 
- watering can (for dampening dry ingredients before adding) 
- shredded wood waste or scrunched newspaper 
- gardening fork 
- a piece of old carpet or polythene sheet 
- green compostable ingredients

Save up enough ingredients for a week or two until you have enough to build a heap in one day.

Add more ingredients as the heap sinks down

Wait at least three months and turn the heap once with a garden fork

Ready to use when dark and crumbly


Carpet or polythene sheet to keep it warm and dry








Shredded wood waste or scrunched up newspaper - a balance of green (nitrogen) and woody (carbon) waste makes the best compost


Base of bricks

1m

1m

 ✓

 tea bags	 raw fruit and veg peelings	 grass cuttings	 dead leaves	 shredded paper	 prunings and dead plants	 cotton and wool
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 woody stems	 cooked food scraps	 cat or dog poo	 meat or bones	 weed seedheads	 perennial weed roots	 diseased plants
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Illustration: Corinne Wick © Copyright Royal Society of Wildlife Trusts 2015

www.wildlifewatch.org.uk

For more information go to the Wildlife Trust – <https://www.wildlifetrusts.org/actions/how-compost-your-waste>

(RHS, 2023; BBC Gardeners World Magazine, 2021; Wildlife Trust, 2023).

Planting trees and hedgerows –

There are a number of things that need to be taken into account when planting and caring for trees (for the first 1-3 years).

Weeding – keep a 1 metre diameter around the tree clear of weeds and grass. As this will reduce the saplings competition for moisture and nutrients.

Mulch, wood chip and even straw bales can be used to suppress weeds – the substrate should be at a depth of around 10 cm to prevent weeds and stop substrate from being blown away. This will also need to be replenished annually.

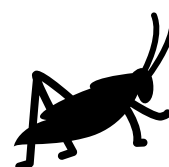
Watering – your trees will adapt to the natural conditions of the space so shouldn't need watering, especially as watering will encourage roots to grow upwards, instead of downwards. However if there is a particularly long dry spell, watering may be needed, when doing so saturate the ground to ensure that water soaks deep!

Mowing – regular grass cutting is not advised as it invigorates the grass causing growth and competition for moisture. If you do mow, make sure not to damage the tree or its guard.

Check your tree guards! – make sure guards and canes or stakes are upright and pushed deep into the soil. Also check guards for grass growing inside them and remove/ up in a need guard.

Guards can be made of a range of things, even recycled plastic bottles can be used.

Pests – can cause damage to the trees stems even inside the guards, keeping guards firmly pressed against the soil and the surrounding area weed free will help keep them at bay.



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