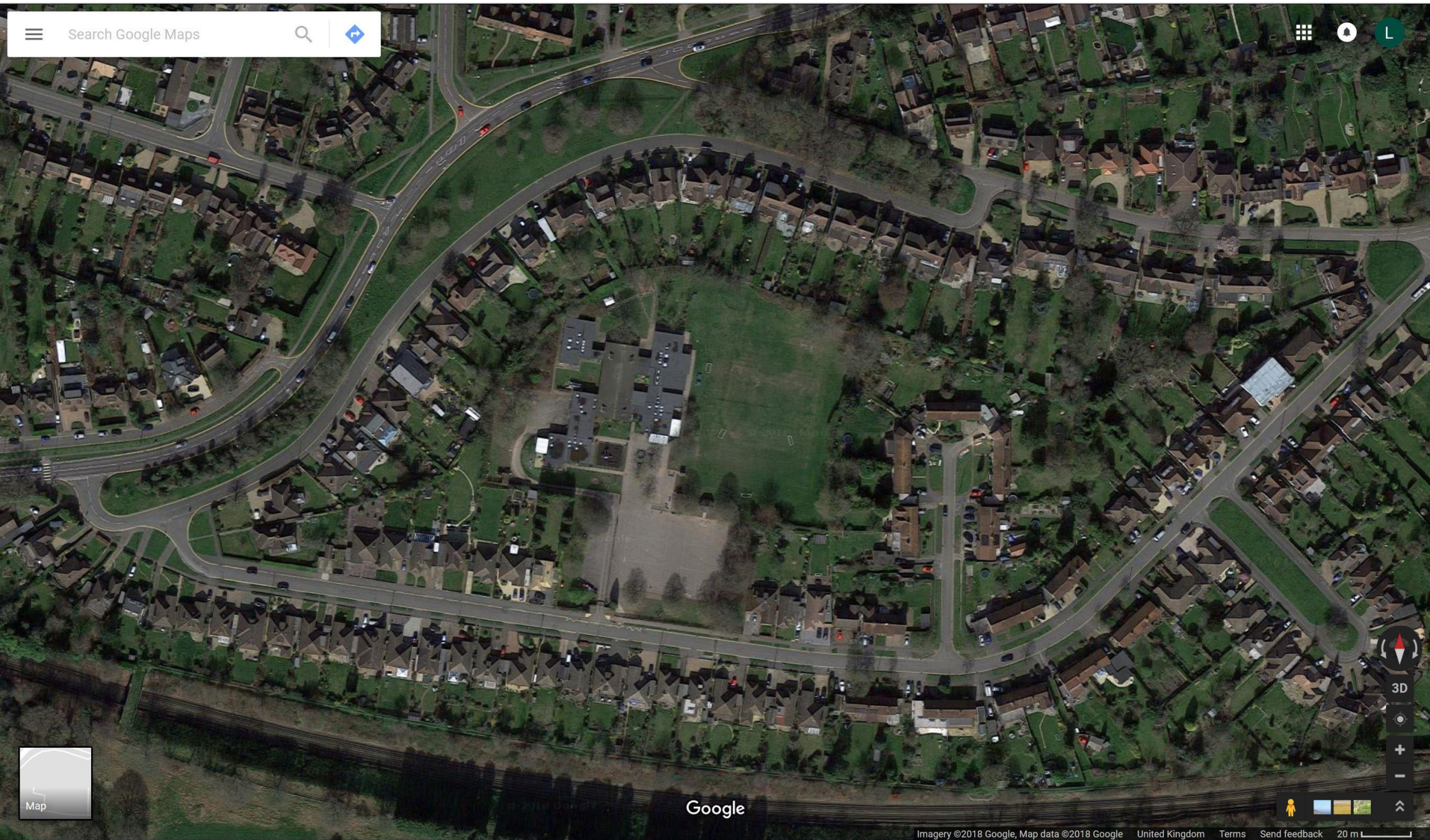


INCREDIBLE EDIBLES: A Kitchen Garden for Little Chalfont Primary School



Little Chalfont Primary School
Location & site – aerial photo of school & surrounding area



Little Chalfont Primary School

School site in total
= c. 3.8 acres / 1.54 hectares

Key areas on school site
= as shown



Woodland pond area 84m²

Kitchen garden, allotment & greenhouse area 180m²



Nursery wild area (includes some raised beds over concrete of original outdoor swimming pool area)



Quiet garden / Willow Corner area 70m²

Memorial bench & tree for former staff & reception pupil



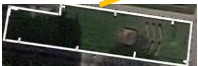
Unused grass area adjacent staff car park (occasional parking)



Existing play frame area



Outdoor mini-stage area



Grassed area adjacent visitor car park



KS1 playground area (to fence)



Trim trail area



Front boundary & scooter park area



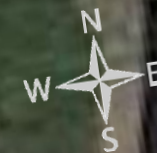
KITCHEN GARDEN AREA

Location on school site & photographs



KITCHEN GARDEN AREA

Aerial photo & features



Chicken-proof fencing

Nature pond area

Restricted fenced pond area,
supervised access only

Year 6 classroom

Manhole
cover

Drain runs assumed
(to be confirmed
by Bucks CC)

Log circle

Greenhouse

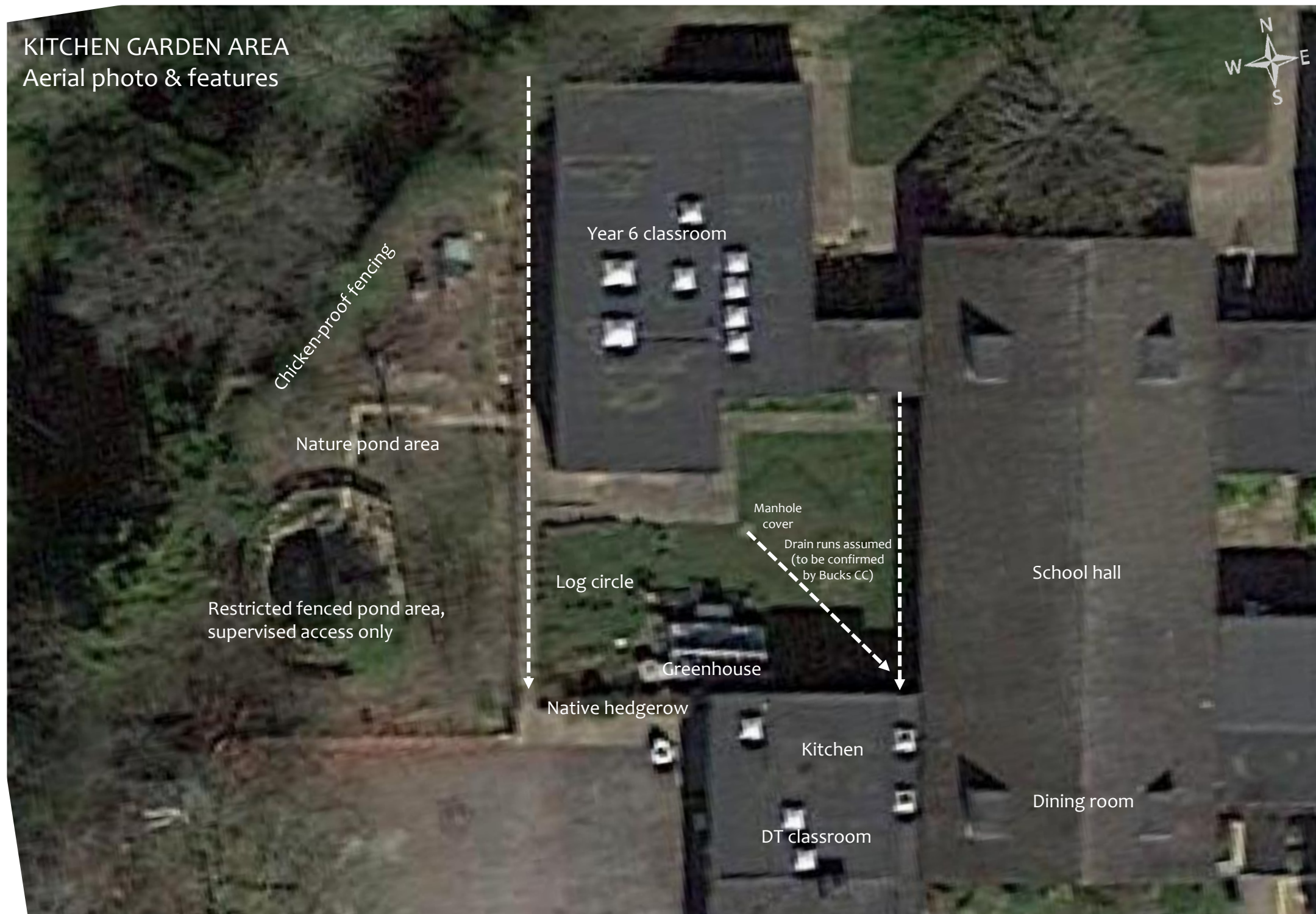
Native hedgerow

School hall

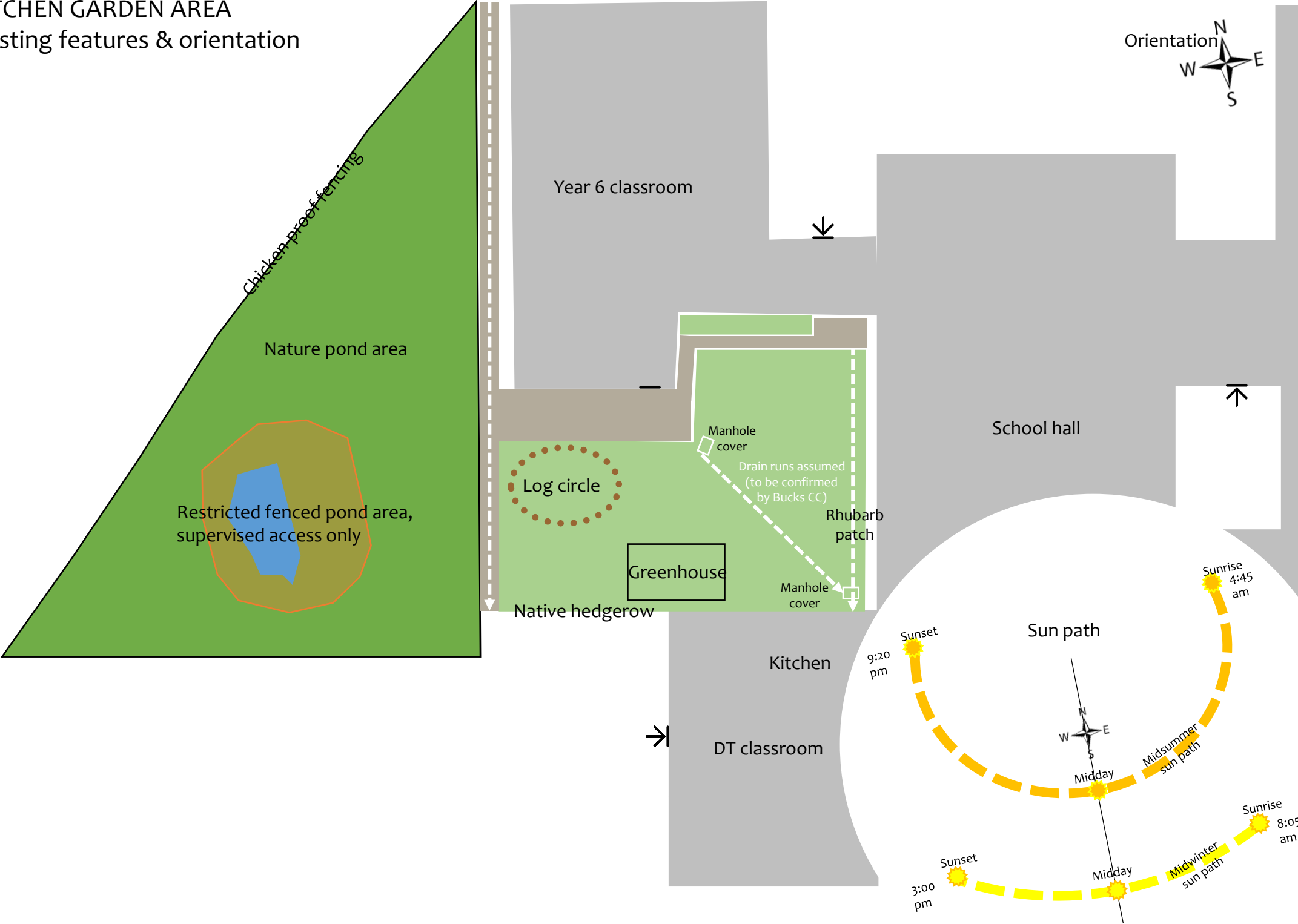
Kitchen

Dining room

DT classroom



KITCHEN GARDEN AREA
Existing features & orientation



KITCHEN GARDEN AREA

What do we want to grow? Crops for year round interest and variety

NB. Some of these will need to be rotated through different beds on annual basis to keep soil healthy & productive

Perennials / long-term cropping

- Jerusalem artichoke (if left in ground)
- Fruit trees
 - Cherry tree – morello can take shaded areas
 - Apple trees
 - Pear tree
- Fruit bushes (need protection from birds)
 - Blueberries
 - Gooseberries
 - Red/whitecurrants
- Fruit canes (need protection from birds)
 - Raspberries
 - Blackberries – thornless or crop wild from hedge
 - Hybrid berries – loganberries, tayberries etc

Early cropping

- Broad beans - annual
- Rhubarb - perennial, can take shaded area

Summer cropping (annual sowing)

- Peas
- Beans - broad beans, purple French beans (magic beans!), runner beans, climbing beans
- Sweetcorn
- Courgettes

Late season/winter interest

- Onions
- Kale
- Pumpkin
- Sprouts
- Parsnips – can overwinter in ground, frost increases sweetness

Greenhouse

- Tomatoes
- Cucumber
- Basil

Vertical planters/drip fed/elevated

- Strawberries – need bird & slug protection

Root crops

- Beetroot
- Parsnip
- Carrots (need pest protection)
- Potatoes (could be done in barrels)

Leaf crops

- Chard
- Cavolo nero (need pest protection)
- Spinach (perpetua var - less bolting)
- Pak Choi
- Lettuce/salads

Fun stuff/edibles to grow

- Nasturtiums
- Calendula
- Borage

Native edible hedgerow

- Sloes/blackhorn
- Blackberries/brambles
- Wild strawberries

Herb garden

- Thyme – different varieties in scented path
- Sage – variegated, purple
- Mint mountain – some sort of pot arrangement to contain invasive roots, many different varieties: peppermint, grapefruit mint, apple mint, chocolate mint, swiss mint, pineapple mint

Hot wall crops

- Apricot/peach
- Grapevine
- Fig

Companion planting

Pest control

- Carrots with leeks, spring onions, garlic or chives – alium smell distracts carrot fly, carrot smell distracts onion fly & leek moth
- Tomatoes with tagetes (French marigolds) – smell deters whitefly
- Broad bean with nasturtium – deflects blackfly
- Strawberries with borage – makes strawberries grow better, attracts pollinating insects including pest predators

Complementary growth

- Sweetcorn with courgettes – 2 of the “3 sisters” courgettes grow low and flat between tall thin sweetcorn blocks
- Dwarf French beans with kale – beans supply nitrogen to kale
- Tomatoes/squash/courgettes with calendula (pot marigolds) – attracts pollinators to flowers

KITCHEN GARDEN AREA

What is needed? Things to build and make

Planting infrastructure

- Raised beds and paths
- Vertical planters/strawberry pipes
- Espalier fence and wall trellising/wires for fruit trees
- Guttering – can start plants off or wall mount
- Watering system
- Rainwater collection barrels & connectors
- Greenhouse shelving/racking
- Tool storage
- Compost bins and leaf mould collector
- Climbing crop supports – canes for pyramids etc
- Crop protection from pests

Wildlife – detrimental to garden

- Anti-deer fencing/gates
- Crop protection frames and fruit netting on battens for walls

Wildlife – beneficial to garden

- Bat boxes
- Bird boxes
- Toad abode
- Hedgehog haven / hog hotel
- Ladybird and lacewing hibernacula

Practical

- Sun sail / sun protection
- Paths

KITCHEN GARDEN AREA

Calendar of tasks for the year

NB. Add to as project evolves, use as tasks list

All year round Saving & collecting materials for garden use – water storage & distribution, plant pots (yoghurt pots), cardboard toilet rolls (for planting), canes, plastic bottles for cloches, garden flints for paths, chicken wire & netting for plant protection, home composting & leaf mould collecting for generating compost, bricks & tiles for weighting down plant and bed covers and bricks as greenhouse heat store, pine needles to mulch acid-loving plants

Autumn	Late harvesting (tree fruit, root veg, squashes, kale), seed collection, clearing beds, winter preparation, spring bulb planting, collecting leaves to compost
Winter	Bare root planting, cleaning (greenhouse, plantpots, tools) storage, winter pruning, garden planning for next year, sourcing & building hardware/landscaping
Spring	Seed planting, taking cuttings, staking, protecting, early harvest (autumn sown broad beans, rhubarb)
Summer	Staking, watering (watering, watering!), harvesting (main crops), selling, picnics & cooking with produce, summer pruning
January Plan crops for beds for the year & crop rotations for soil health	July Harvesting beans, peas
February Make seed lists & order/buy. Last of the bare root planting and winter pruning	August Harvesting tomatoes, cucumbers, soft fruit, courgettes
March Planting seeds to start in greenhouse/on windowsills	September Harvesting sweetcorn, squashes
April Planting seeds to start in greenhouse/on windowsills Planting out in beds (once frosts have passed)	October Plant spring bulbs, winter garlic
May Planting out in beds (once frosts have passed) Planting salad crops	November
June Harvesting autumn sown crops Planting salad crops, some harvesting salad crops	December Covering up beds for the winter Collect Christmas trees to shred as acid/ericaceous mulch (blueberries)

KITCHEN GARDEN AREA

Materials

Start-up	Ongoing maintenance & upkeep	Participation essentials
Greenhouse repairs & safety – replacement of missing roof and wall glass panels with BS glass (check spec on greenhouse)	Canes & string for staking/support (or other natural staking e.g. coppiced hazel/ash/willow)	Plastic trugs (multi-purpose) – storage of class tools & kneelers, collecting weeds & garden debris, carrying plants and water
Cold frames for moving on young plants	Manure for autumn top-dressing	Gardening tools (class set or between pairs): hand trowels, hand fork, spade, fork, dibbers, peg & line
Raised beds/timber	Pellet fertiliser for spring	Kneelers (class set)
Topsoil to fill beds (buy in bulk or ask FB?)	Food-safe timber treatment (non-toxic)	Gloves
Manure for enrichment (anyone keep horses?!)	Seeds	Activity-specific e.g. tin cans, plastic bottle
Watering system (essential especially for summer holidays). Hosepipes, drip hose, connectors, solar powered tap dispenser	Compost (make own and from leaf mould too)	Wheelbarrow (ideally x2)
Slabs and/or bricks & plants for herb paths	Bricks – as heat store/regulator in greenhouse	
Gravel/stones for paths over weed membrane		
Greenhouse shelving for starting out plants		
Plant pots (ask families to collect/neighbours/FB)		
Rainwater butt collection system (butt including stand, tap, diverter & child proof lockable lid)		
Compost for starting seeds		
Seeds & cuttings		
Water trays for standing seedling pots in (ikea boot trays?)		
Canes & string for staking/support		
Netting & battening for crop protection		
Fence posts, wires & eyes for espaliering fruit trees		
Tool storage		
Produce storage (ikea wooden crates?)		

Proposed layout overview

**Warm wall fruit e.g. fig, apricot, kiwi
trained against south facing sheltered wall**

Note on accessibility:

- 60cm wide beds are about as far as children can reach across to garden from the side of the bed without standing on the soil & compacting it/damaging contents
- 2.4m long beds allow a class group to surround at same time
- Robust sided beds also allow sitting on the sides to garden which may assist some users. Gravel board system insufficiently strong to allow this, would need to install proprietary system or sleepers (which being thicker would require additional spacing of bed position)
- Beds need to be at least 60cm apart to allow for wheelbarrow access
- Beds should be at least 90cm apart to allow wheelchair access. Beds illustrated are about 60cm apart so reduce no of beds accordingly to accommodate wheelchair access. Also consider robust path surface (slabs or bricks rather than gravel).
- See also:

[www.carryongardening.org.uk/files/documents/Raised%20beds%20final Nov08.pdf](http://www.carryongardening.org.uk/files/documents/Raised%20beds%20final%20Nov08.pdf)

Leaf mould production alongside fence of pond area?

**New gate needed
here to keep out
deer/foxes**

8.23m

Area where can set out “market stalls” for sale of produce

Scope to add larger or squarer beds in this area depending on requirements and budget
- e.g. could have flower bed area for cut flowers or area for larger vegetables or perennials

Scope to add planters
and pots in this area
for quick-cropping &
seasonal display

Potting & teaching area – retain cable reel table & some tree stumps

equipment
storage box

tool
storage box

cold
frame
1.2m²

cold
frame
1.2m²

cold
fram
1.2m

cold
fram
1.2m

parking!

After built

4.5m

Existing staging/shelving to be retained in greenhous

Class raised beds
x 8, to be
managed on a
crop rotation

Strawbe tower

Shady working & plant storage area

Planting area for espaliered fruit trees (2 x Bramleys Seedling, 2 x Egremont Russet (Cordon)),

Wormery?

Planting area for espaliered shade tolerant fruit
e.g. Morello cherry

17.1m



KITCHEN GARDEN AREA
Proposed layout – fruit trees

Key features

- Dwarfing rootstock to keep small & pickable by children
- Grown against walls and wire fences as cordons & espaliers to maximise growing space in garden & to enable wall mounted crop protection where required
- Style of growing enables a variety of fruit and types of species to extend interest and growing season
- Plants located according to sun/shade preference to maximise fruiting potential

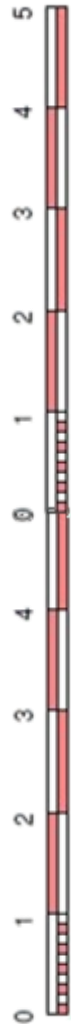
Warm wall fruit e.g. fig, apricot, kiwi
trained against south facing sheltered wall



Planting area for espaliered fruit trees (2 x Bramleys Seedling, 2 x Egremont Russet (Cordon),



Planting area for espaliered shade tolerant fruit
e.g. Morello cherry

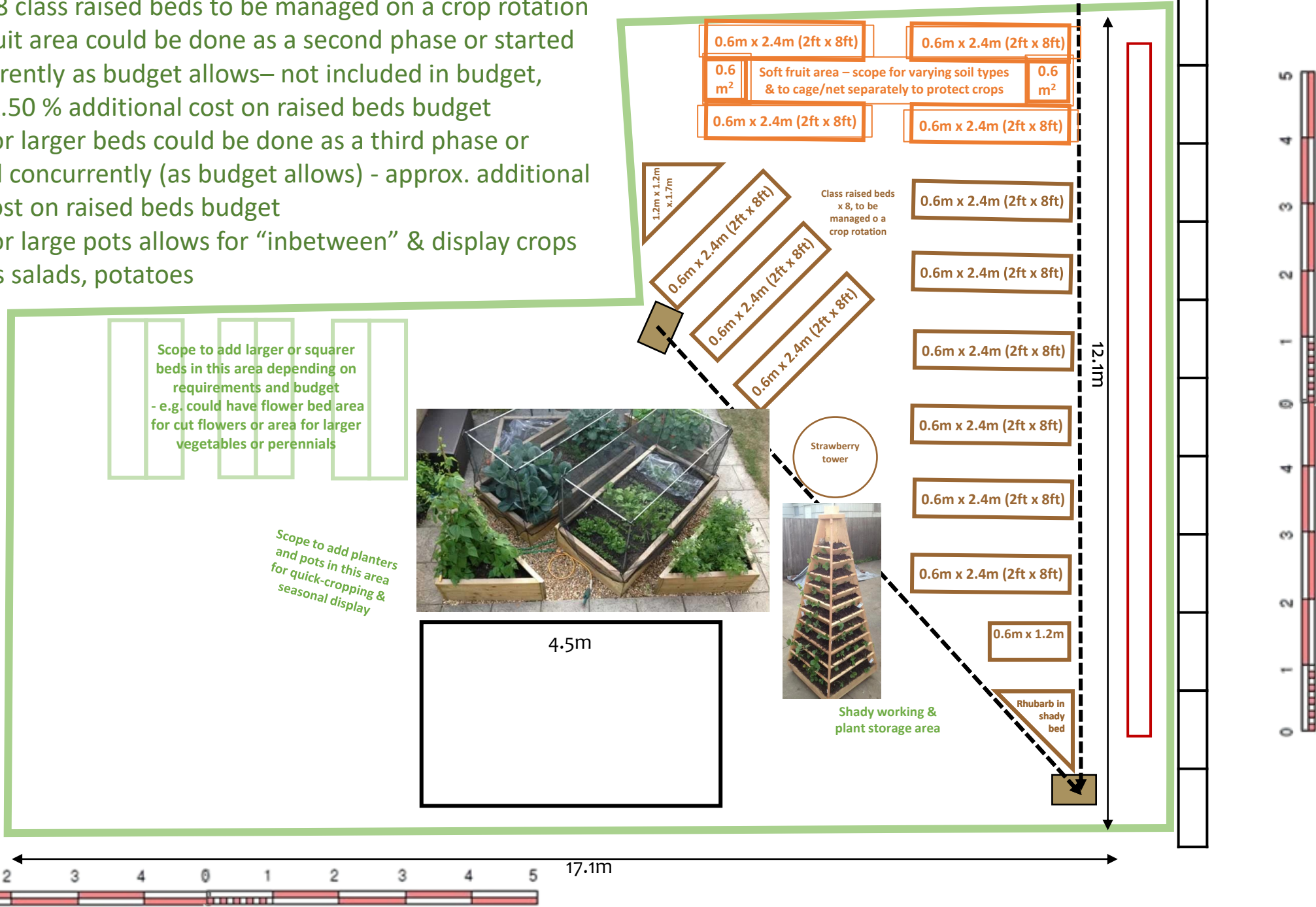


KITCHEN GARDEN AREA

Proposed layout – raised beds (essential for soil, existing ground too stony to crop well)

Key features

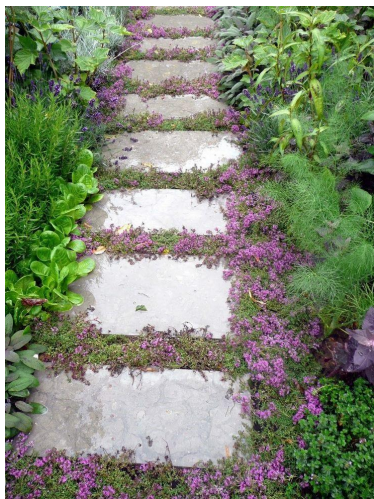
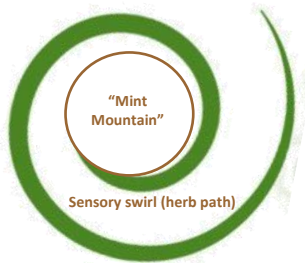
- Set of 8 class raised beds to be managed on a crop rotation
- Soft fruit area could be done as a second phase or started concurrently as budget allows– not included in budget, approx.50 % additional cost on raised beds budget
- Area for larger beds could be done as a third phase or started concurrently (as budget allows) - approx. additional 75% cost on raised beds budget
- Area for large pots allows for “inbetween” & display crops such as salads, potatoes



KITCHEN GARDEN AREA
Proposed layout – herbs

Key features

- Mint mountain in stacked pots (reduces invasiveness and allows many different varieties to be grown). Potential for a larger herb bush at centre e.g. rosemary
- Herb spiral path surrounding for additional interactive & sensory element to herb growing. Low growing heat loving herbs such as thyme, sage, oregano, marjoram etc



KITCHEN GARDEN AREA

Proposed layout – key infrastructure

Key features

- Watering system connected to mains water outside tap, supplemented with rainwater collection from greenhouse and school roof
- Greenhouse retained & repaired with internal shelving, new external tool storage boxes
- Bed layout avoids existing drain runs
- Leaf mould collection and composting bins located in pond area to maximise planting space here
- Wormery in shade corner for creating liquid feed

New gate needed here to keep out deer/foxes

Leaf mould production alongside fence of pond area?



Potting & teaching area – retain cable reel table & some tree stumps

equipment storage box tool storage box



cold frame 1.2m² cold frame 1.2m² cold frame 1.2m² cold frame 1.2m²

Wheelbarrow parking!

4.5m
Existing staging/shelving to be retained in greenhouse

Water butts



Wormery?



KITCHEN GARDEN AREA

Raised bed options

Proprietary solution – Which? Best Buy 2021

- Harrod Horticultural Standard Raised Beds, kiln dried pressure treated pre-cut & pre-drilled timber
- 3 year guarantee, 3 week current lead time
- **15cm high (or 30cm high for double height beds)**
- **3.5cm/1.4" thick** timber planks & optional capping for strength
- includes corner & edge posts & all screws for quick assembly
- Strong enough to sit/lean on edges
- Range of standard sized nets etc available to match
- www.harrodhorticultural.com/standard-wooden-raised-beds-pid7994.html#product-tabs



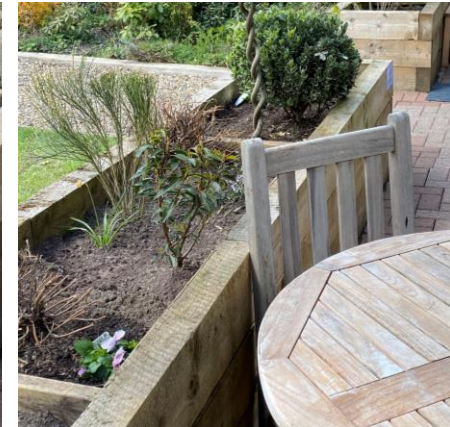
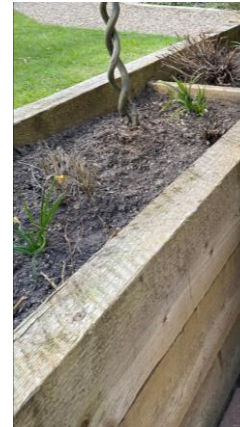
Highest price



Lowest price

Homemade using sleepers

- **20cm high (or 40cm high for double height beds)**
- **10cm thick** sleepers
- needs cutting and drilling/screwing
- screws not priced
- no need for additional corner fence posts as can screw thick boards to each other
- Strong enough to sit/lean on edges



Homemade using gravel boards

- **15cm high (or 30cm high for double height beds)**
- **2.2cm thick** planking
- needs cutting and drilling/screwing
- screws not priced
- separate corner fence posts also need cutting to size
- Any additional
- Less robust, wouldn't take sitting on, higher beds may bow with weight of soil



KITCHEN GARDEN AREA

Ballpark budget headlines – see detailed budget spreadsheet for options

BALLPARK BUDGET - assuming raised beds are 1/2 low, 1/2 mid height							
1	Greenhouse repairs & safety						£ 5.97
2	Cold frames						£ 900.00
3	Raised beds						
	stepping up 4 low (15cm high) 4 mid (30cm)	HH proprietary option					£ 1,574
	stepping up 4 low (15cm high) 4 mid (30cm)	sleeper option					£ 823.43
4	Topsoil to fill beds (buy in bulk or ask FB?)	Grade A topsoil from local High Wycombe bulk supplier - stepping up 4 low & 4 mid beds	£ 53.30	£ 53.30	£ 3.55	£ 213.20	£ 213.20
5	Manure for enrichment (anyone keep horses?!!)	0.73m3 veg & fruit topsoil bulk bag from Van Hage - stepping up 4 low & 4 mid beds	£ 204.11	£ 149.00	£ 3.55	£ 596.00	£ 596.00
6	Paths between beds - something permeable						
7	Watering systems (essential especially for summer holidays). Hosepipes, drip hose, connectors, programmable timer tap dispenser Rainwater butt collection system (butts including stand, tap, diverter & child proof lockable lid)					£ 270.40	£ 411.37
						£ 140.97	
8	Starting plants						£ 649.56
9	Protecting & supporting plants						£ 515.91
10	Fence posts, wires & eyes for espaliering fruit trees						£ 150.76
11	Storage						£ 538.00
12	Pest control	NB. may be other elements to add that not yet considered, including side gate tools, kneelers, trugs, wheelbarrow					£ 225.92
13	Participation essentials						£ 466.35
	TOTAL - proprietary option						£ 6,247.04
	TOTAL - sleeper option						£ 5,496.47

Intended as a starting point for discussion, can be phased as budget allows & alternatives sought to refine price. Some areas have more flex depending on scope desired e.g. cold frames, starting plants. Please also see the detailed budget spreadsheet to understand basis for costings and estimates.

Raised bed budget researched in some detail as this & watering system are core essentials. Above allows for 8 x class beds (4 low beds and 4 mid-height beds) plus two smaller triangular beds on proprietary option and soil & manure to fill. Add 50% of item 5 to include for soft fruit beds and add 75% of item 5 to include for larger beds marked green on plans (these two elements could be later phases).

KITCHEN GARDEN AREA

Sources of support which could be explored & pursued

- Check any discounts with gardening suppliers available via RHS Gardening for Schools scheme
- Crowdsourcing from the parent body – infrastructure elements, materials & funds
- Little Chalfont WI who maintain the village green flowerbeds
- Little Chalfont Parish Council and Community Association – possible funding, requests for materials via LCCA & PC newsletter
- Local community gardeners
- Amersham Men in Sheds (for making bird boxes, hedgehog homes)
- Van Hage/Rowan/other garden centres?
- Local gardening businesses – e.g. Applewood
- Local businesses promoting organic produce e.g. The Grocer Shops, Rex Bakery
- Tesco Bag for Life and/or Waitrose Green Token scheme funding application, HS2 impact funding?
- Facebook shout-outs & requests – Acts of Kindness Chiltern, Little Chalfont Big Chat, YourAmersham
- Other schools gardening projects & co-ordinators – CSG Village Schools, Chorleywood

KITCHEN GARDEN AREA

Risks to consider and manage (initial outline) – to be kept reviewed in use

Use of tools & sharp implements

- Age-appropriate use of tools & safety signage
- Children to be taught how to use, transport and store items safely
- Tools to be stored securely when not in use and counted in and out when being used

Greenhouse/glasshouse safety

- All glass to be cleaned
- Check all panels are safety glass and apply safety film at earliest opportunity if not, replace any non-compliant panels with safety glass in longer term
- Tool use to include safety briefing on swinging tools
- Create barrier/exclusion zone in areas immediately adjacent where possible
- Plant potential falling food crops (eg apples) away from glasshouse to avoid accidental panel breakage

Water safety

- Hosepipe water sources to be clearly labelled “not for drinking”
- Rainwater bins to be securely lidded to avoid accidental drowning risk
- Buckets & watering cans to be stored empty & upside down to avoid risk to wildlife

Adjacency of car parking to edible crops

- Ensure cars not reversed to growing area, so exhaust fumes not sent directly into food areas
- Edible crops not to be grown immediately adjacent car park
- All crops to be washed thoroughly before consumption

Allergies

- Don't plant nut crops or known serious allergens e.g. wheat, sesame
- All crops to be properly and clearly labelled
- Rule of thumb don't eat anything without first checking with an adult
- Gloves to be worn as precaution for skin allergies NB. Check for latex allergies with waterproofed gloves!
- Handwashing before and after garden sessions and prior to food

Ideas we've liked elsewhere
Fruit growing ornamental and space-saving methods



Ideas we've liked elsewhere
Inspiring, imaginative & clever ways of growing



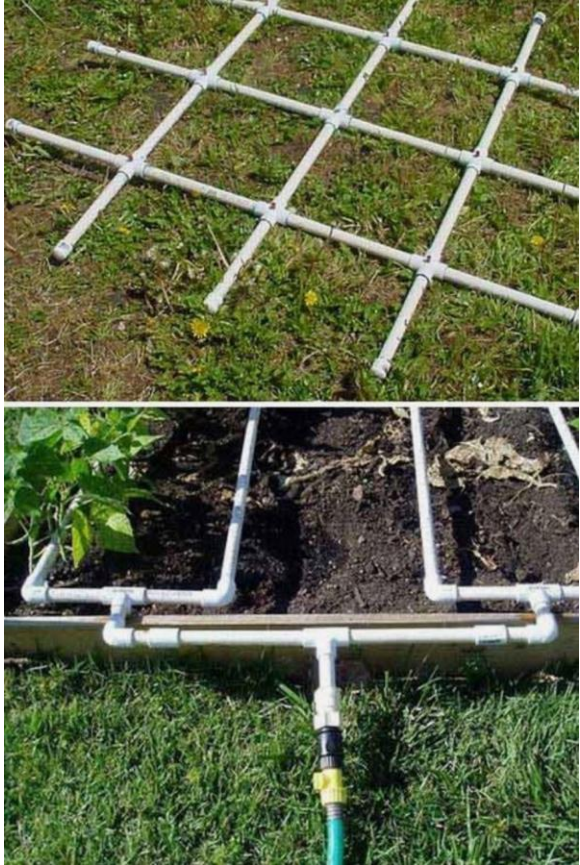
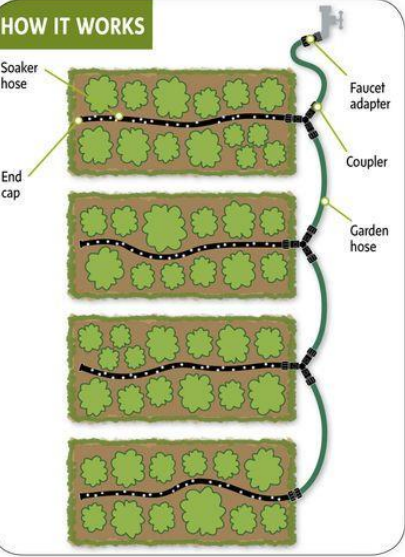
Ideas we've liked elsewhere
Companion planting for pest control, increased cropping (& attractiveness!)



Ideas we've liked elsewhere
Home project elements to make / take / incubate



Ideas we've liked elsewhere
Plant protection & irrigation



Ideas we've liked elsewhere
Composting & leaf mould production
(put this alongside pond fencing?)
Add fun elements like Mr Bloom's
Compostarium!



Ideas we've liked elsewhere
Sensory elements



Ideas we've liked elsewhere
Homes for beneficial wildlife – pollinating insects habitats, hedgehogs eat pests like slugs



Ideas we've liked elsewhere
Fun/maker opportunities



Easy Garden Markers



Ideas we've liked elsewhere



KITCHEN GARDEN AREA

Notes/source info

Standard Wooden Raised Beds	15cm	30cm	45cm
2ft x 2ft (0.6m x 0.6m)	£58	£99	£134
2ft x 4ft (0.6m x 1.2m)	£84	£140	£189
2ft x 6ft (0.6m x 1.8m)	£104	£166	£232
2ft x 8ft (0.6m x 2.4m)	£126	£194	£267
4ft x 4ft (1.2m x 1.2m)	£101	£160	£219
4ft x 6ft (1.2m x 1.8m)	£116	£193	£266
4ft x 8ft (1.2m x 2.4m)	£140	£227	£312
6ft x 6ft (1.8m x 1.8m)	£133	£224	£303
6ft x 8ft (1.8m x 2.4m)	£158	£249	£335
8ft x 8ft (2.4m x 2.4m)	£183	£286	£396

<https://www.harrodhorticultural.com/standard-wooden-raised-beds-pid7994.html>

Allotment Corner Raised Bed With Capping 1 Tier (15cm) H

--Please Select--

Allotment Corner Raised Bed Without Capping 1 Tier (15cm) H	
Allotment Corner Raised Bed Without Capping 2 Tier (30cm) H	
Allotment Corner Raised Bed Without Capping 3 Tier (45cm) H	
Allotment Corner Raised Bed With Capping 1 Tier (15cm) H	£70
Allotment Corner Raised Bed With Capping 2 Tier (30cm) H	£105
Allotment Corner Raised Bed With Capping 3 Tier (45cm) H	£138

• Each Corner Wooden Raised Bed measures 122cm x 122cm x 172cm

• Available in 3 working heights; 15cm, 30cm or 45cm

