

# BIOPHILIA

## what?

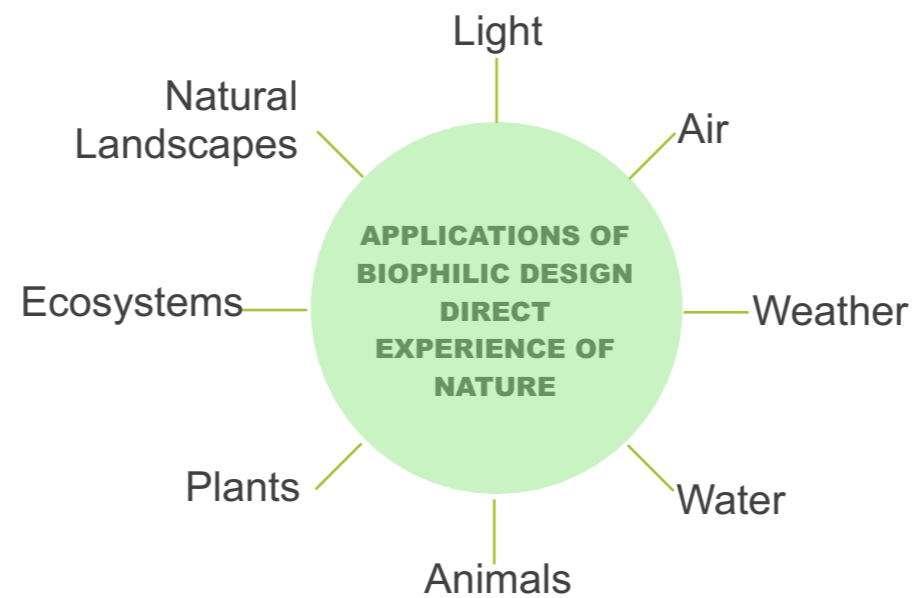
Biophilia - A love of nature. It focuses on people's instinctive attraction to nature and its processes. It suggests we all have a deep, genetic connexion to the natural world evolved over hundreds of thousands of years of living in rural settings.

The term was popularized by American psychologist Edward O Wilson in the 1980's, when he observed how increasing urbanisation was leading to a dis-connexion with the natural world. Given the the increasingly urbanized, man-made environment is a feature of more and more peoples' lives, Biophilia is increasingly important to our health and well-being.

Many buildings are designed lacking adequate natural light, natural ventilation, natural materials, vegetation, views, environmental shapes and forms, and other evolved affinities for the natural world. Research suggests these environmentally impoverished spaces foster fatigue, symptoms of disease, and impaired performance, and the simple introduction of natural lighting, outside views, and vegetation can result in enhanced health and productivity.

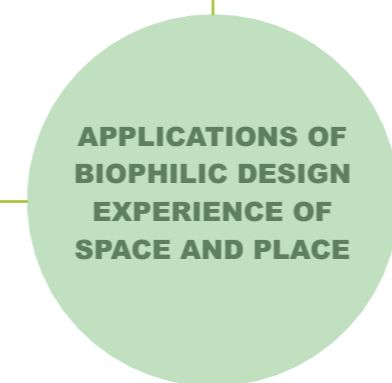
Biophilic design seeks to connect our inherent need to affiliate with nature to the modern built environment. It recognizes that our species has evolved for more than 99% of its history in adaptive response to the natural world and not to human created or artificial ones - this need is thought to remain instrumental to physical and mental health, fitness, and well-being.

Source:  
<<http://www.oliverheath.com/>>  
<<https://vimeo.com/ondemand/biophilicdesign/27874539>>  
<[https://www.slideshare.net/PaulRamoie/thesis-presentationbiophilic-design?next\\_slideshow=1](https://www.slideshare.net/PaulRamoie/thesis-presentationbiophilic-design?next_slideshow=1)>  
<<https://www.theguardian.com/teacher-network/2016/jul/21/environmental-studies-the-schools-being-powered-by-nature>>  
<<http://www.metropolismag.com/architecture/what-is-and-is-not-biophilic-design/>>  
([www.biophilic-design.com](http://www.biophilic-design.com)) <<http://www.biophilic-design.com/>>

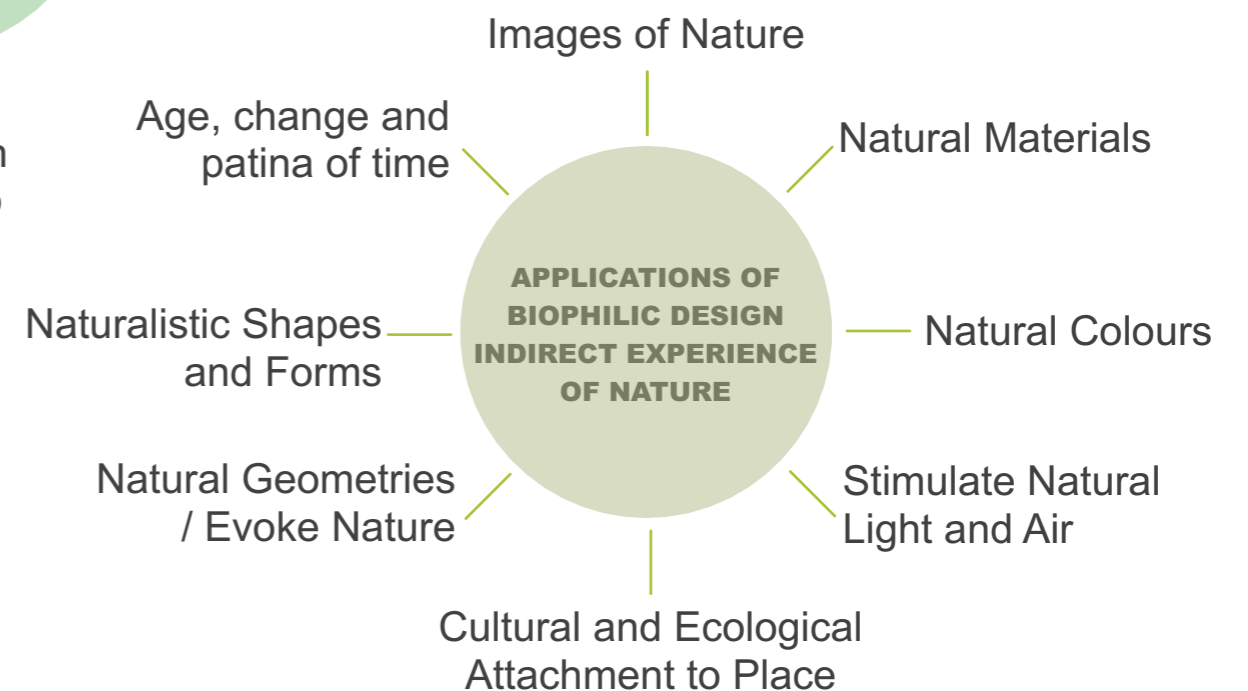


## Prospect and Refuge

Transitional Spaces



Integration of parts to wholes



## education

Given that a study of office workers found that those with views of vegetation performed 10-25% better in mental function and memory recall tests. Imagine the benefits that Biophilic Design could have on students and staff in an educational setting. Research suggests: increased rates of learning 20-25%, improved test results, concentration levels and attendance, reduced impacts of ADHD.

Although trials have demonstrated that having plants in classrooms can lead to improved performance of 10-14% and to reduce the impact of ADHD, it's not always possible to incorporate them. For The children with special educational needs (in particular autism) this is often the case, as plants don't withstand the physical interactions with the students.

There is evidence that mimicking nature and using natural analogues (such as natural textures, patterns, colours and images in floor and wall coverings) can positively impact perceptual and physiological stress responses.

**BIO**

**PHILIA**

Transitional  
Spaces

Prospect and Refuge

Encouragement of  
animals and plants

Age, change and  
patina of time visible  
in natural materials

Stimulate Natural  
Light and Air

Glazed corners -  
light and airiness  
- connexion with  
outdoors

Natural Light (from  
sunpiness)

Connexion to natural  
process through  
electricity generation

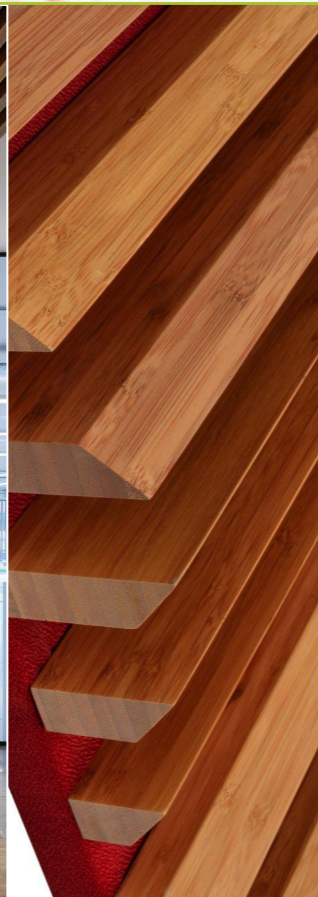
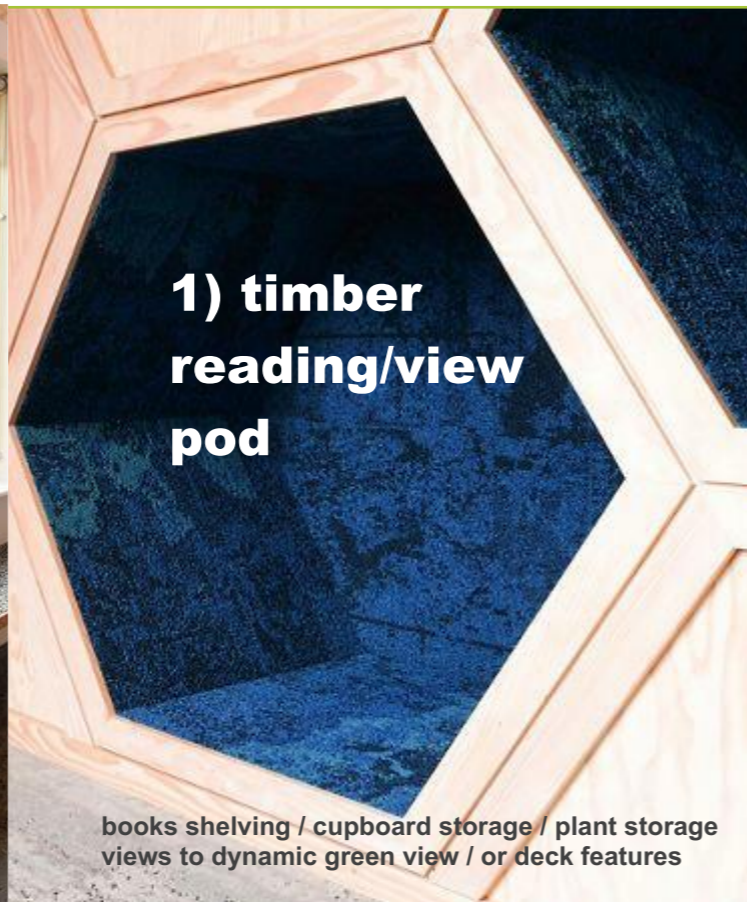
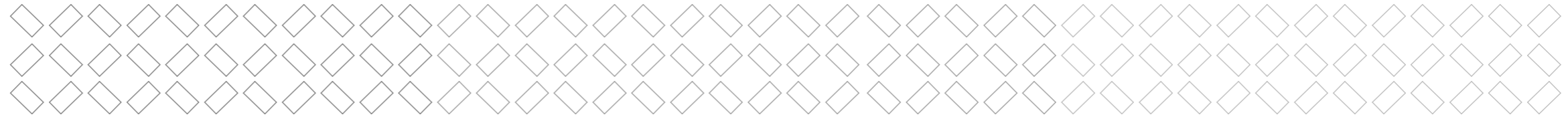
Natural Materials

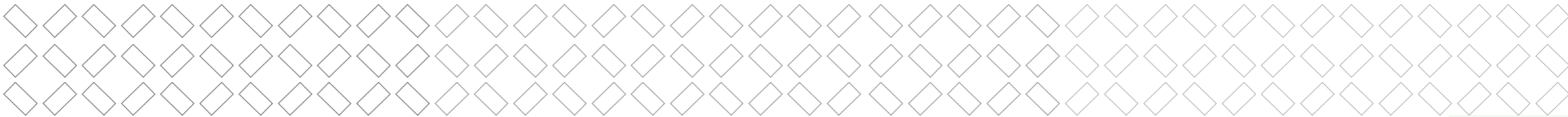
Natural Light

Natural Colours

Natural Materials



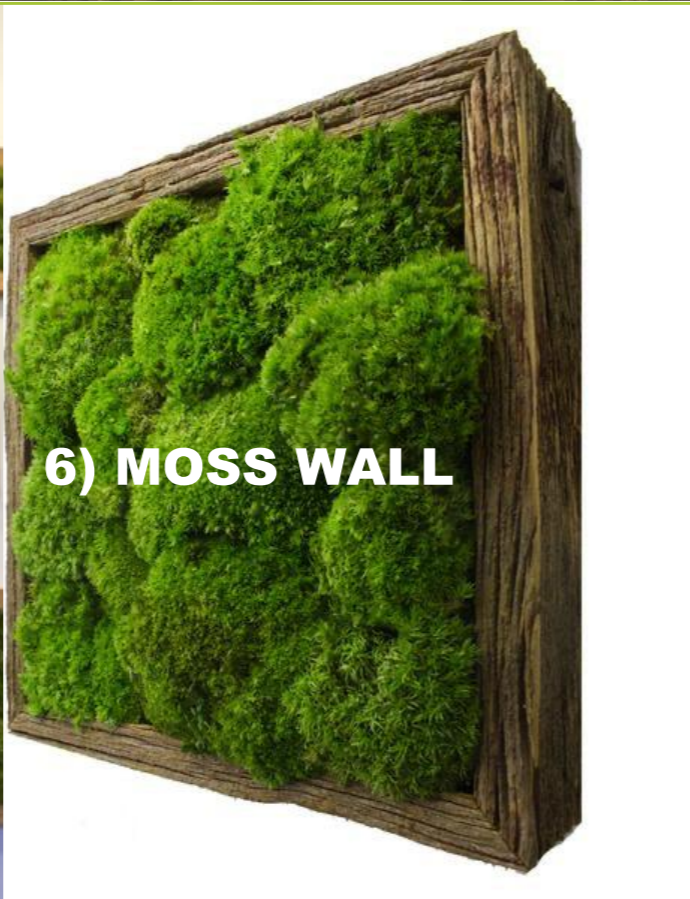




**5) PLANTS -  
WALL  
MOUNTED**  
**A PLAYFUL  
'ANALOGUE'**



**7) SUGGESTIONS OF NATURE - MANIFESTATION  
- REPLACE THOSE WHITE DOTS!**

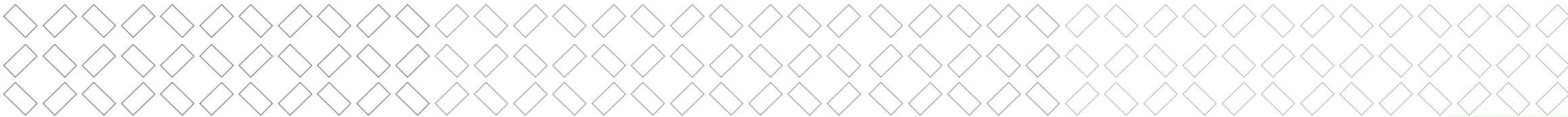


**6) MOSS WALL**



**8) BIOPHILIC GYM OR  
BREAK OUT / SPACE**

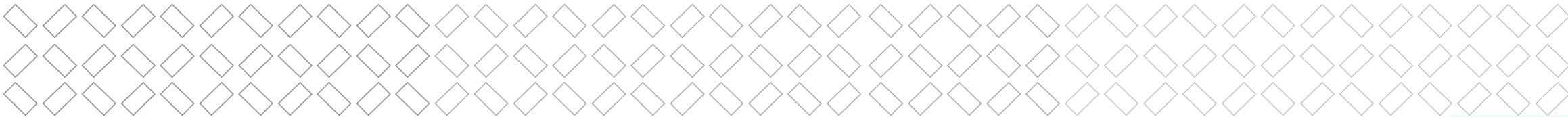
**BIO  
PHILIA**  
**DESIGN IDEAS - INTERNAL**



9)  
ENCOURAGE  
NATURAL  
MATERIALS  
IN FITTINGS  
AND  
FIXTURES

NOTES AND SOURCES:

- 1) TIMBER WINDOW POD  
books shelving / cupboard storage / plant storage?  
views to dynamic green view / or deck features
- 2) INDOOR GREEN LIVING WALL / 'GREEN SCENES' WALLPAPER  
<<https://www.wallsauce.com/designer-wallpaper-murals/image-source-photography-birch-forest-sunlight-wall-mural>>  
<<https://www.muralswallpaper.co.uk/wall-murals/landscape-mural-wallpaper/>>  
Needn't be figurative – abstract design? Accent walls?
- 3) TIMBER ACOUSTIC CEILING OR ALL PANELLING  
<<http://vtecgroup.co.uk/acoustic-panels/>>  
<<https://bcltimberprojects.co.uk/>>  
  
Increase the amount of natural materials internally
- 4) GRASS LIKE FLOOR COVERING  
<<https://www.artificiallawn.co.uk/alternative-carpeting-artificial-grass-indoors/>>  
  
Like Norman Foster did 40 years ago...  
  
PROVIDE CONNEXION WITH IN AND OUT (DECK TO CLASS?)  
Or a green rug:  
<<http://www.ikea.com/gb/en/products/textiles-rugs/rugs/hampden-rug-high-pile-bright-green-art-50203788/?cid=gb%7Cps%7Cpla%7C%7C%7C%7C%7C>>
- 5) INTERNAL WALL MOUNTED PLANTERS  
  
Office areas? include resilient 'analogues' for SEN or Nursery?
- 6) LEAF MANIFESTATION / MURALS  
  
simple repeated leaf design? etching? do something better than those white dots...
- 7) Moss Wall:  
<<https://www.mosswalluk.co.uk/>>  
<<https://inleaf.co.uk/moss-walls/>>  
<<http://officelandscapes.co.uk/what-we-do/green-walls/moss-walls>>  
<<http://greenworks.eu/>>
- 8) BIOPHILIC GYM  
<<http://www.cladglobal.com/news.cfm?codeid=329159>>
- 9) ENCOURAGE USE OF NATURAL MATERIALS IN FURNISHING? (benefits of biophilic design in schools extend beyond academic performance: the use of natural materials in school buildings has also been found to reduce stress levels. A 2009 study of a school in Austria (pdf) found that classrooms with flooring, ceiling and cupboards made from timber slowed the heart rates of students learning in that environment ) Guardian Article.

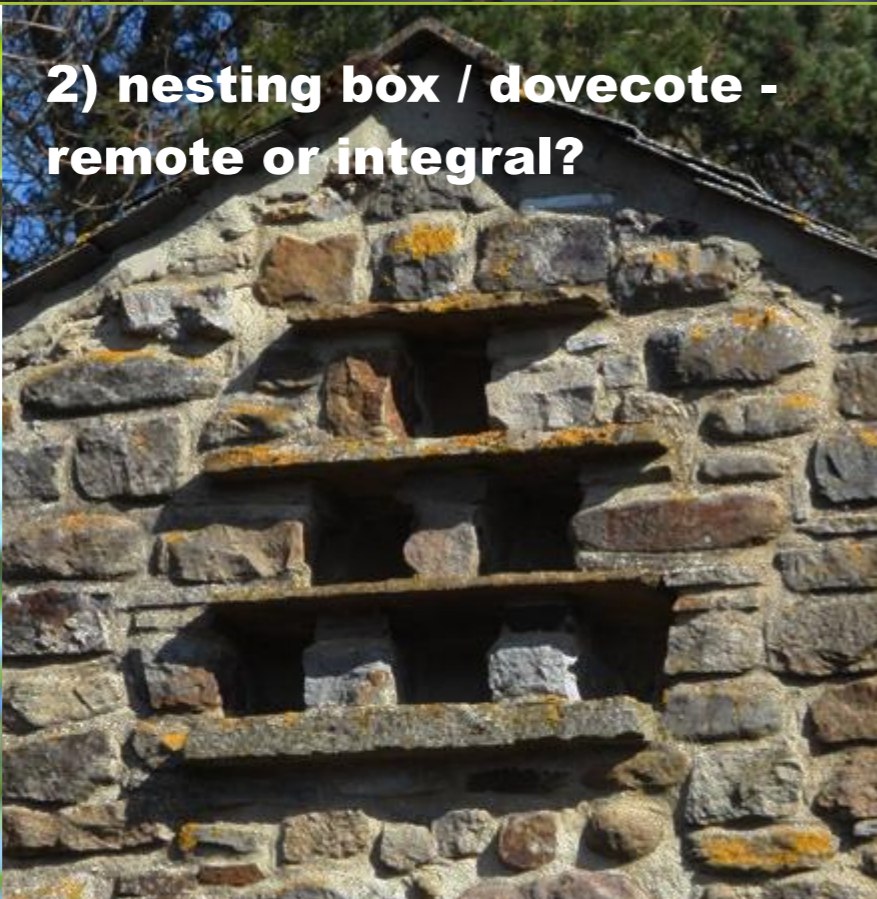


**BUILD YOUR OWN?!**

**1) bug hotel**



**3) green rigging  
between canopy  
posts / fin walls?**



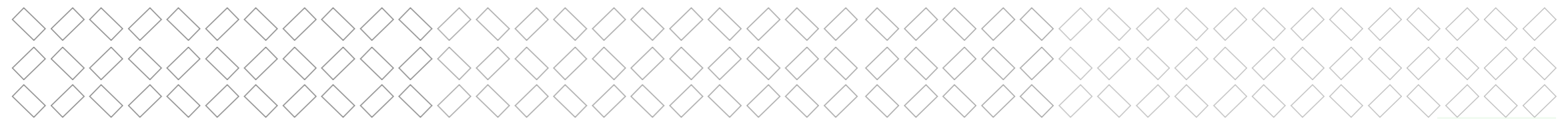
**2) nesting box / dovecote -  
remote or integral?**



**4) green decks /  
outdoor class /  
planted steps /  
external seating**

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**DESIGN IDEAS - EXTERNAL**



**5) wall mounted planters**



**7) Green Wall**



**6) the dissolved corner**



**6) bio-mimicking balustrade  
(laser-cut) ply / corten / etc)**



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**DESIGN IDEAS - EXTERNAL**

## NOTES AND SOURCES:

EXTERNAL: (NOTE: SECURITY / MAINTENANCE / PUPIL AGE AND NEEDS MAY DICTATE NOT ALL ARE SUITABLE FOR ALL LOCATIONS) – Orientate views to these features.

1) BUG HOTEL  
fin wall detail – / Remote location

BUILD YOUR OWN: use old pallets  
<<https://www.wyevalegardencentres.co.uk/cms/tips-and-advice/tips-for-success/bug-hotel/>>  
<<https://www.rspb.org.uk/get-involved/activities/give-nature-a-home-in-your-garden/garden-activities/build-a-bug-hotel/>>

Old wooden pallets / Strips of wood / Straw / Moss Dry leaves / Woodchips / Old terracotta pots  
Old roofing tiles / Bricks, preferably those with holes through them / Old logs / Bark / Pine cones Sand / Soil/  
Hollow bamboo canes / Dead hollow stems cut from shrubs and herbaceous plants  
A sheet of roofing felt / Planks of wood - Whatever else you can find - preferably natural materials...

Read more at <https://www.rspb.org.uk/get-involved/activities/give-nature-a-home-in-your-garden/garden-activities/build-a-bug-hotel/#PjAZGRI53BrXjtjK.99>

2) NESTING / BIRD BOX / DOVECOTE:  
Site remotely / incorporate into building detail?

3) GREEN RIGGING  
<<http://www.spencerrigging.co.uk/architectural/green-wall-rigging/>>  
Fin wall detail / between columns / planter at base

4) GREEN DECKS / OUTDOOR CLASS POSSIBILITIES  
large astro decks  
raised planters  
mesh for climbers / ponds?!?  
external seating / step detail  
encourage environment for outdoor classroom – activity tables, etc.

5) WALL MOUNTED PLANTER:  
Encourage planting.  
<<https://www.ypo.co.uk/product/detail/D12987>>

6) LIVING STEPS (raised schemes)

7) DISSOLVED CORNERS  
Evoke Frank Lloyd Wright! Connexion with the outside - light / air / openness / hapiness

8) FUNKY BALUSTRADING - LASER CUT?  
Evoke Natural Geometries (Art Noveau)  
(glass with print)  
(metal / ply?)



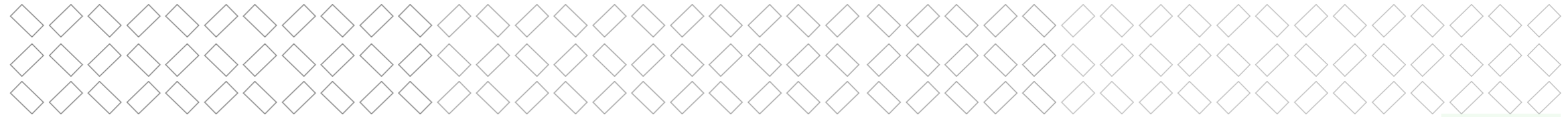
**CASESTUDY: St Mary's  
Infant School by Jessop  
and Cook Architects**



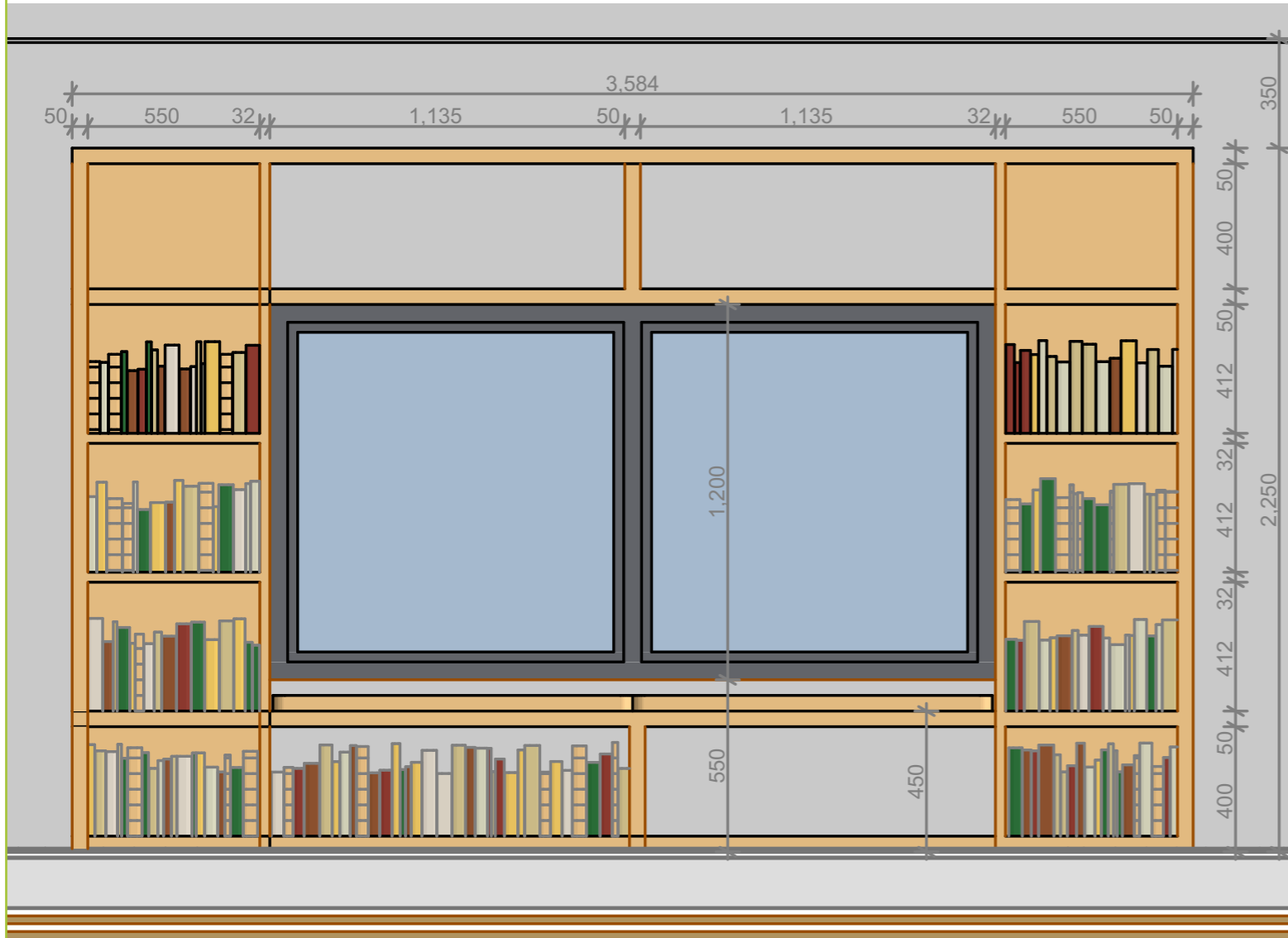
**CASESTUDY: Garden  
School, Hackney Golfier  
Langston Architects.**

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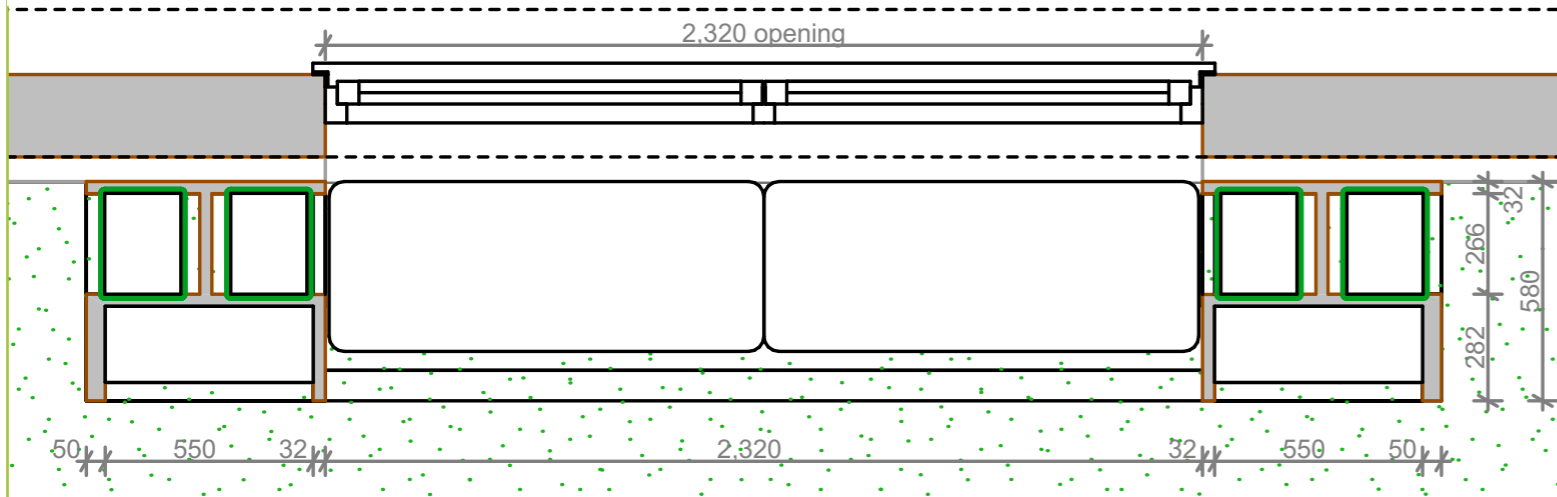
**DESIGN IDEAS - EXTERNAL**



## LIBRARY POD:



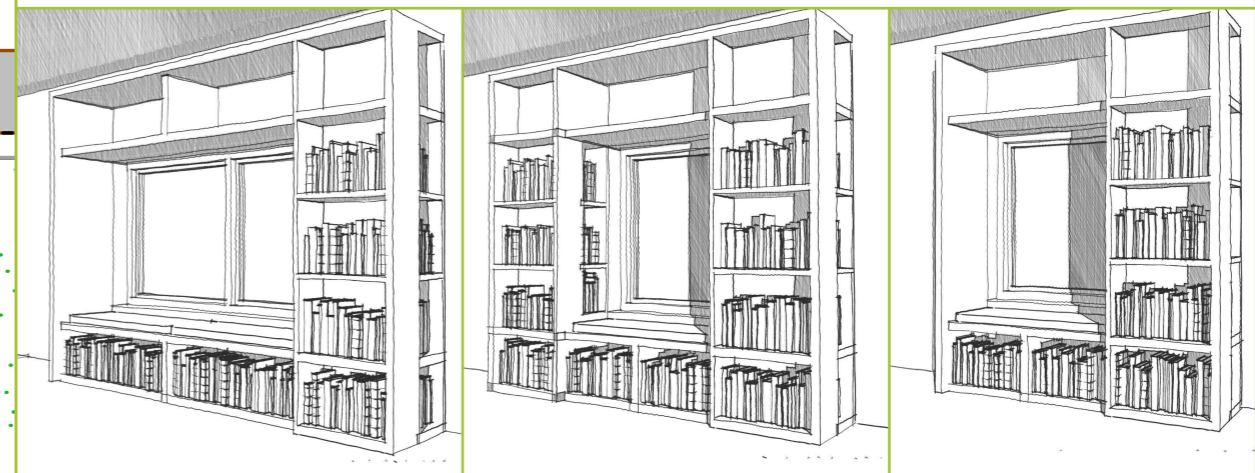
PLAN / ELEV: 1:20



RENDER:

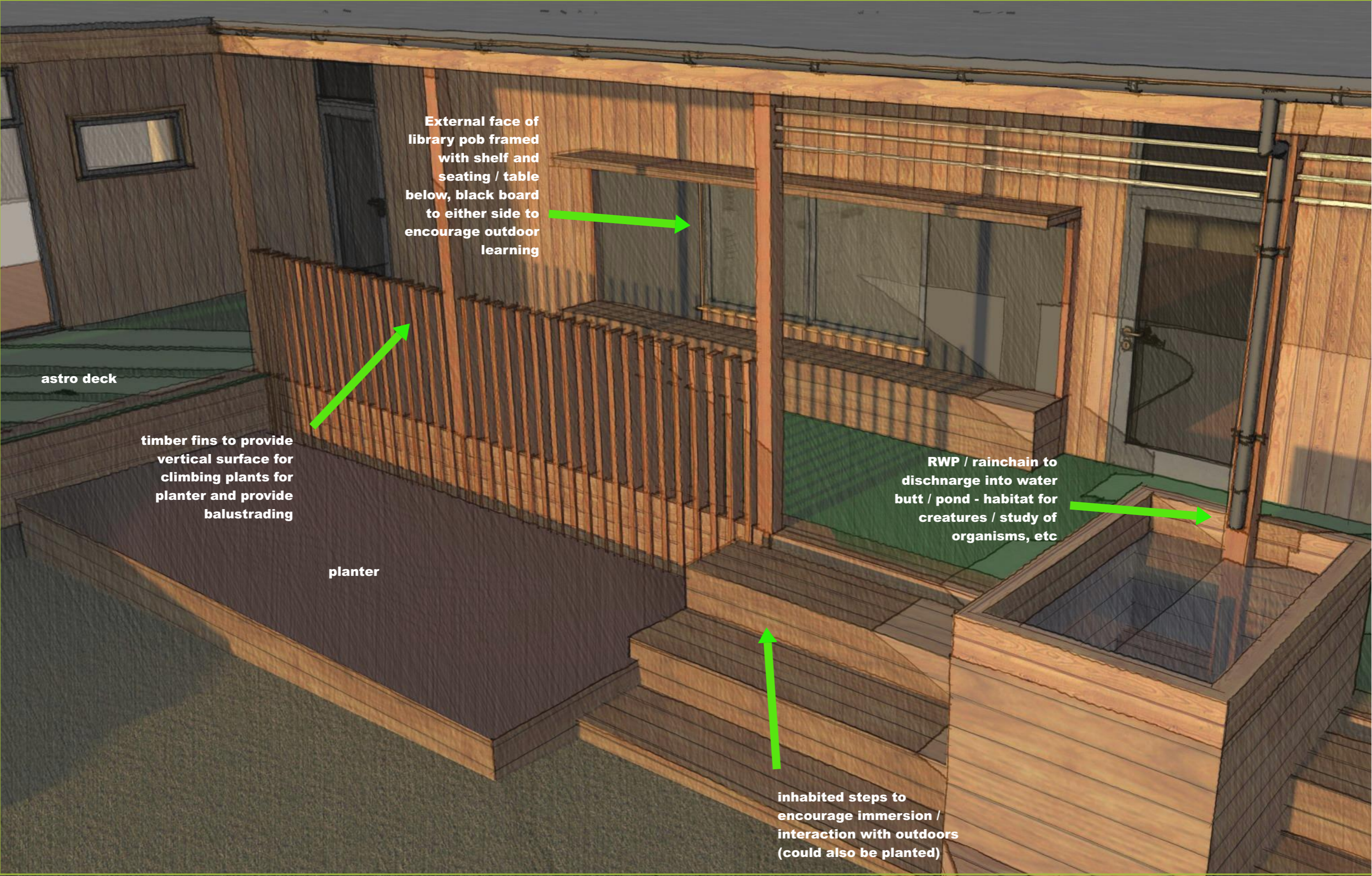
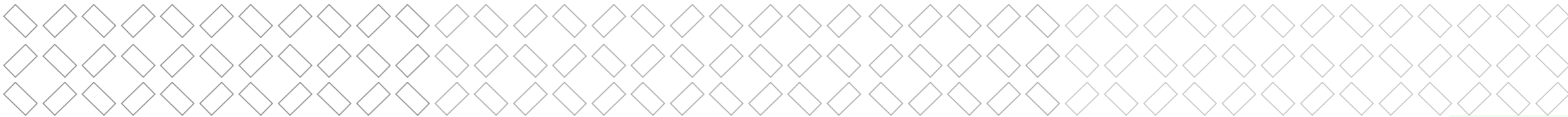


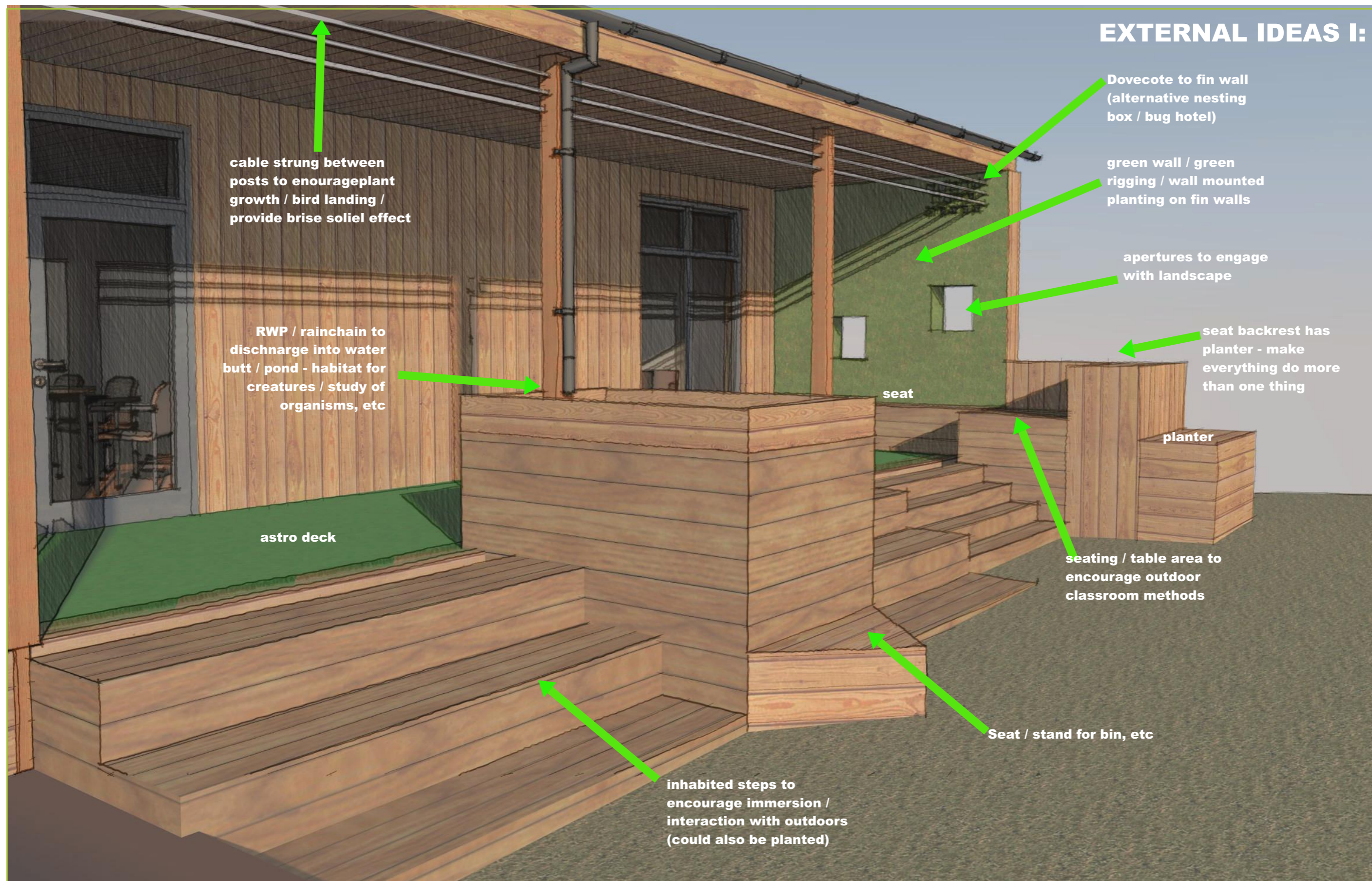
OTHER OPTIONS:



**BIO**  
PHILIA

**TGE - BIO-OPTIONS - WINDOW POD**





**BIO**  
PHILIA

**BIO-OPTIONS - EXTERNAL IDEAS II**

