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BIOPHILIA

what?

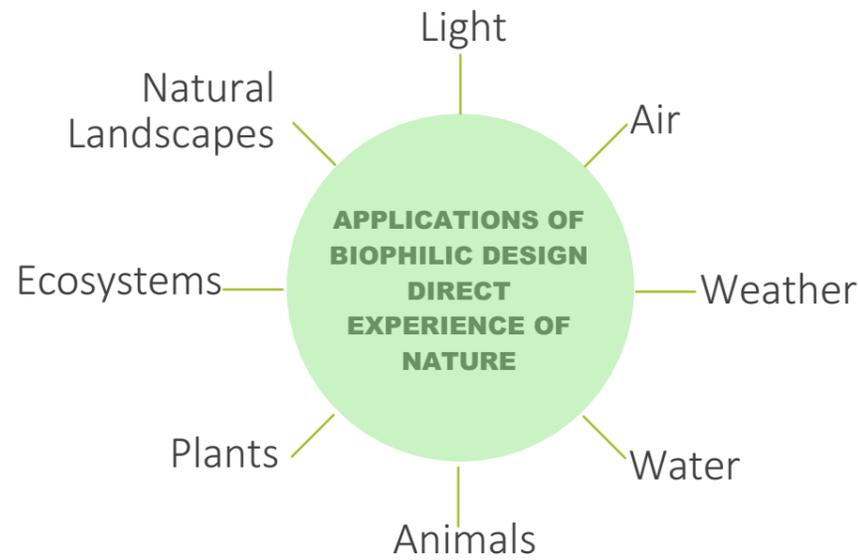
Biophilia - A love of nature. It focuses on people's instinctive attraction to nature and its processes. It suggests we all have a deep, genetic connexion to the natural world evolved over hundreds of thousands of years of living in rural settings.

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.

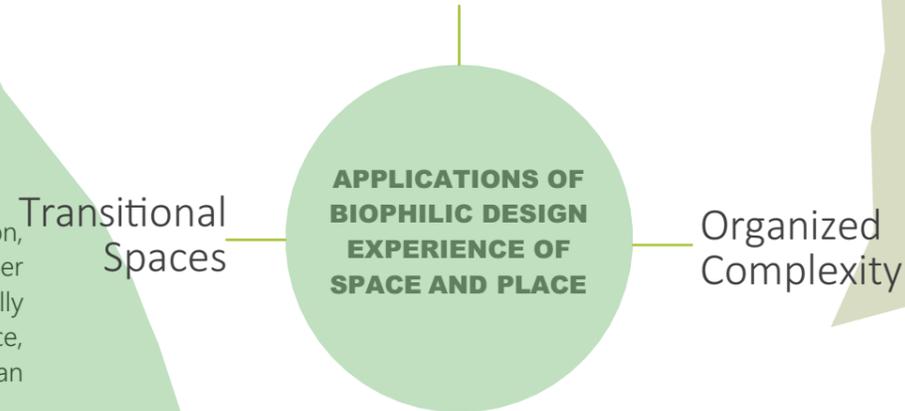
Many buildings are designed lacking adequate natural light, natural ventilation, natural materials, vegetation, views, environmental shapes and forms, and other evolved affinities for the natural world. Research suggests these environmentally impoverished spaces foster fatigue, symptoms of disease, and 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.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/>>



Prospect and Refuge

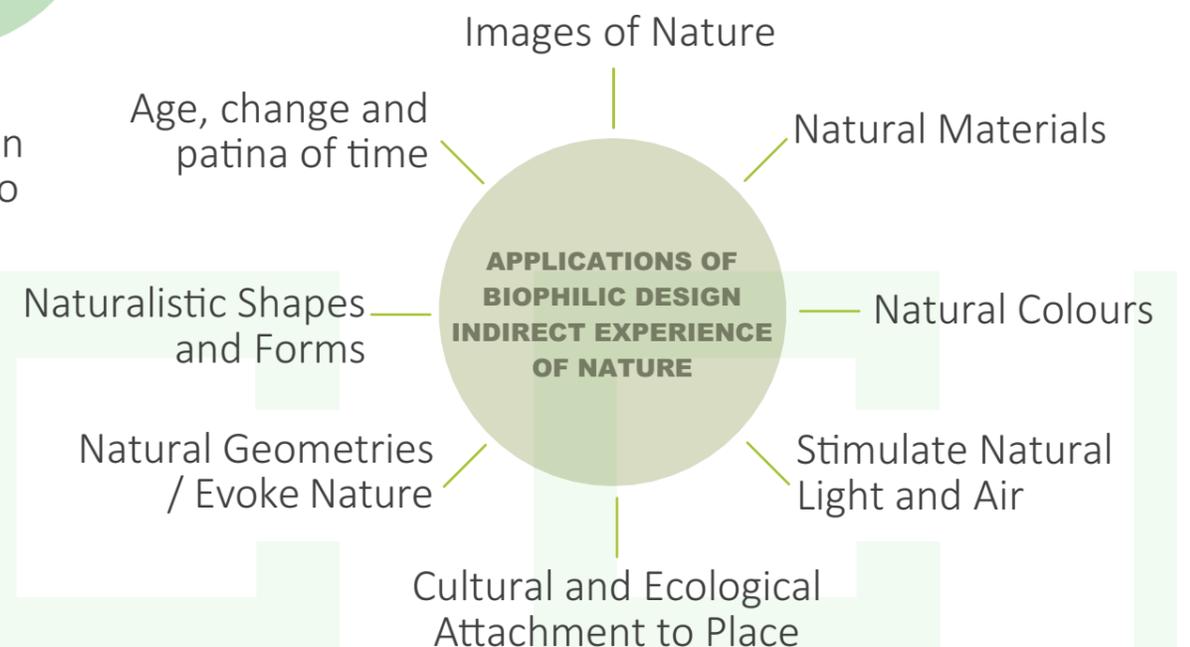


education

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.



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Transitional Spaces

Prospect and Refuge

Encouragement of animals and plants

Natural Light (from sunpipes)

Connexion to natural process through electricity generation

Natural Materials

Age, change and patina of time visible in natural materials

Stimulate Natural Light and Air

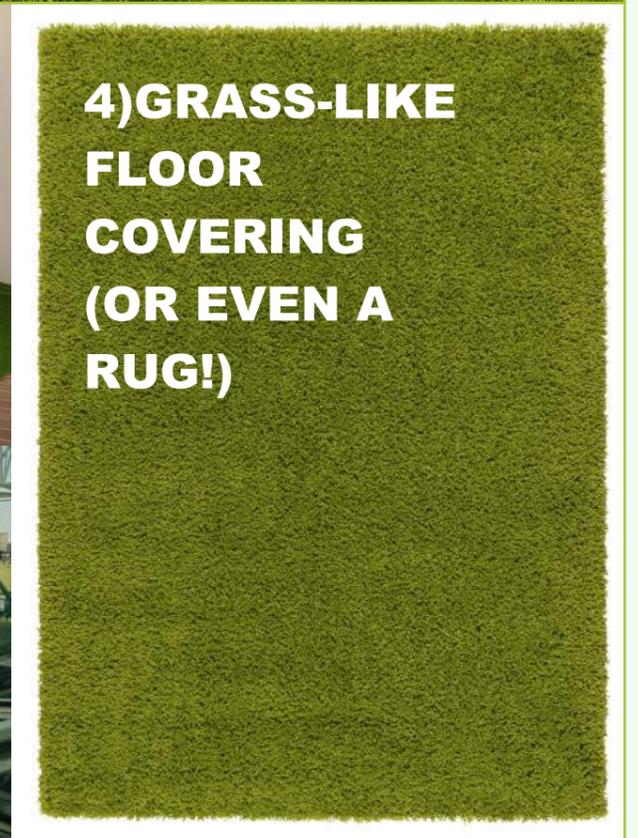
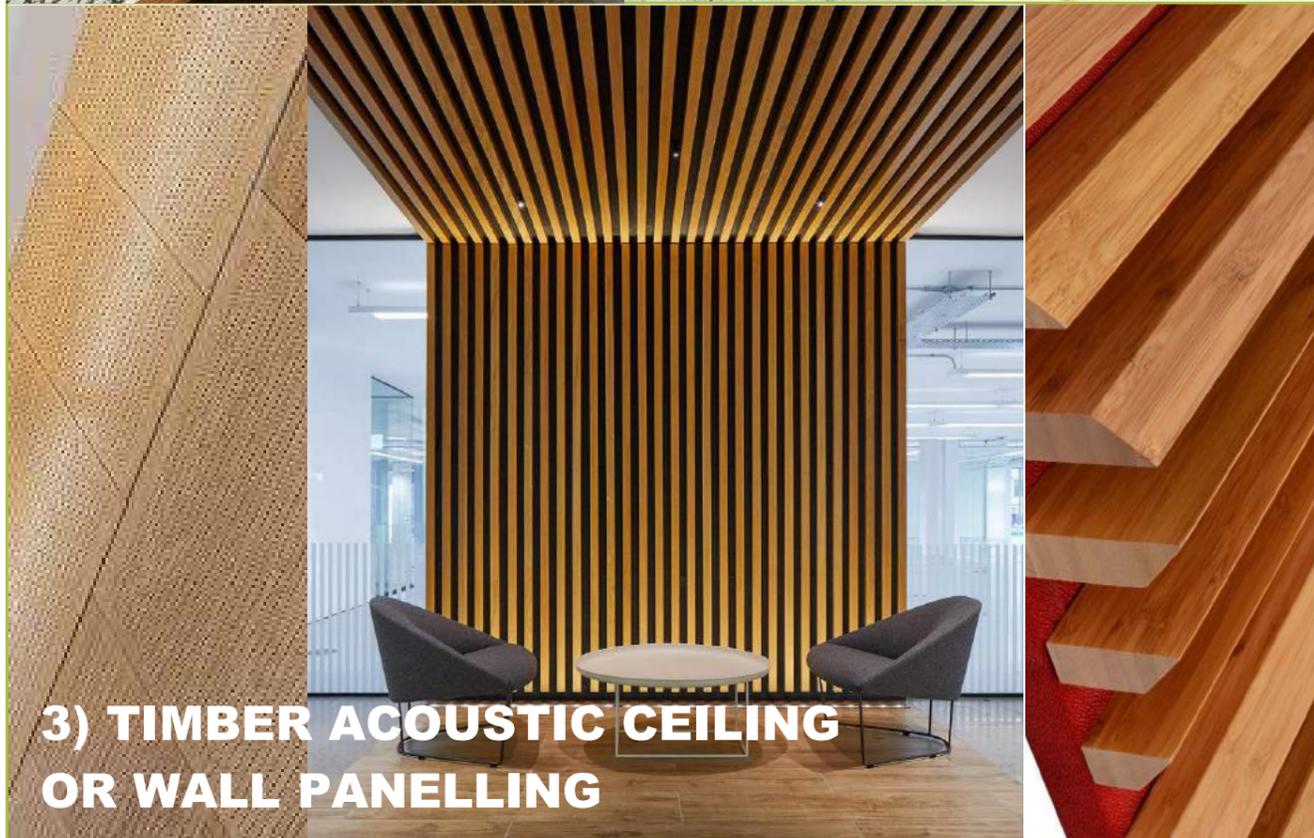
Glazed corners - light and airiness - connexion with outdoors

Natural Light

Natural Colours

Natural Materials



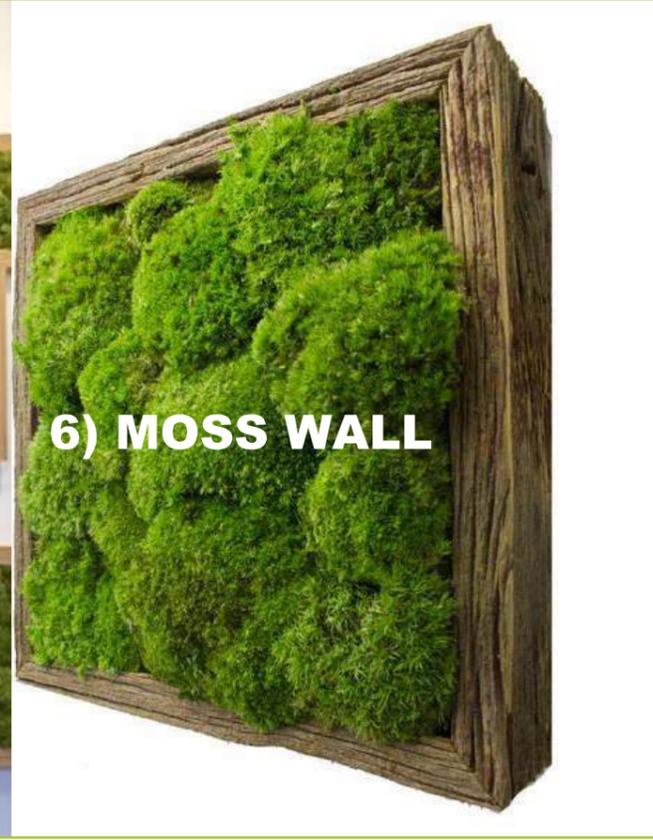




5) PLANTS - WALL MOUNTED
A PLAYFUL 'ANALOGUE'



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



6) MOSS WALL



8) BIOPHILIC GYM OR BREAK OUT / SPACE

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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://vtegroup.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/hampen-rug-high-pile-bright-green-art-50203788/?cid=gb%7Cps%7Cpla%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/>>

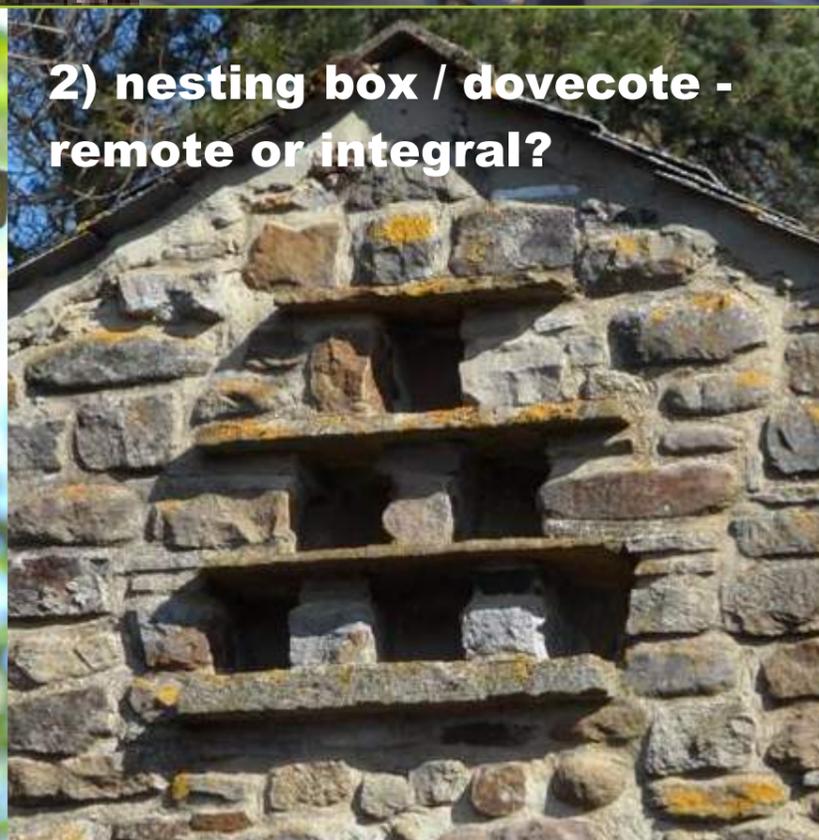
<<http://officelandscapes.co.uk/what-we-do/green-walls/moss-walls>>

<<http://greenworks.eu/>>

8) BIOPHILLIC 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.



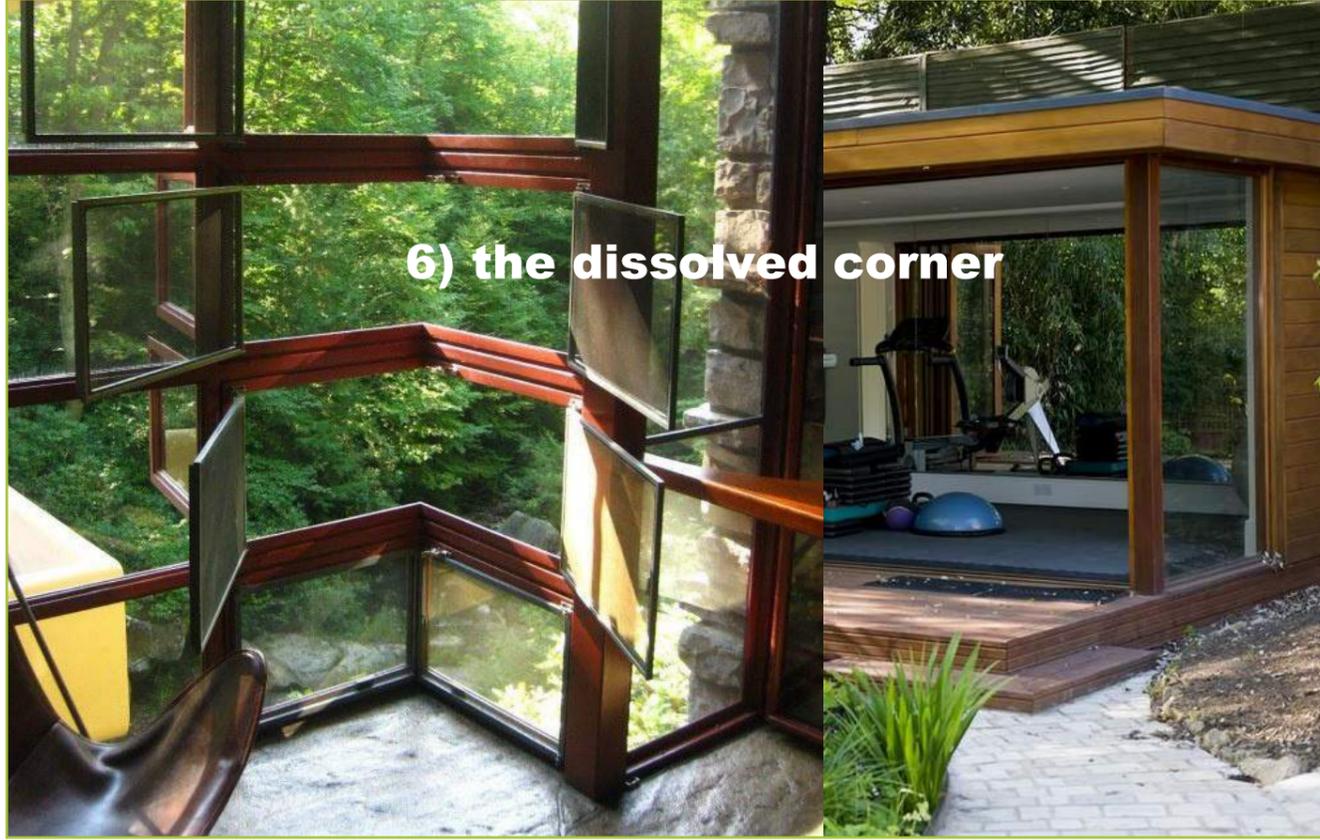
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DESIGN IDEAS - EXTERNAL



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 / happiness

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

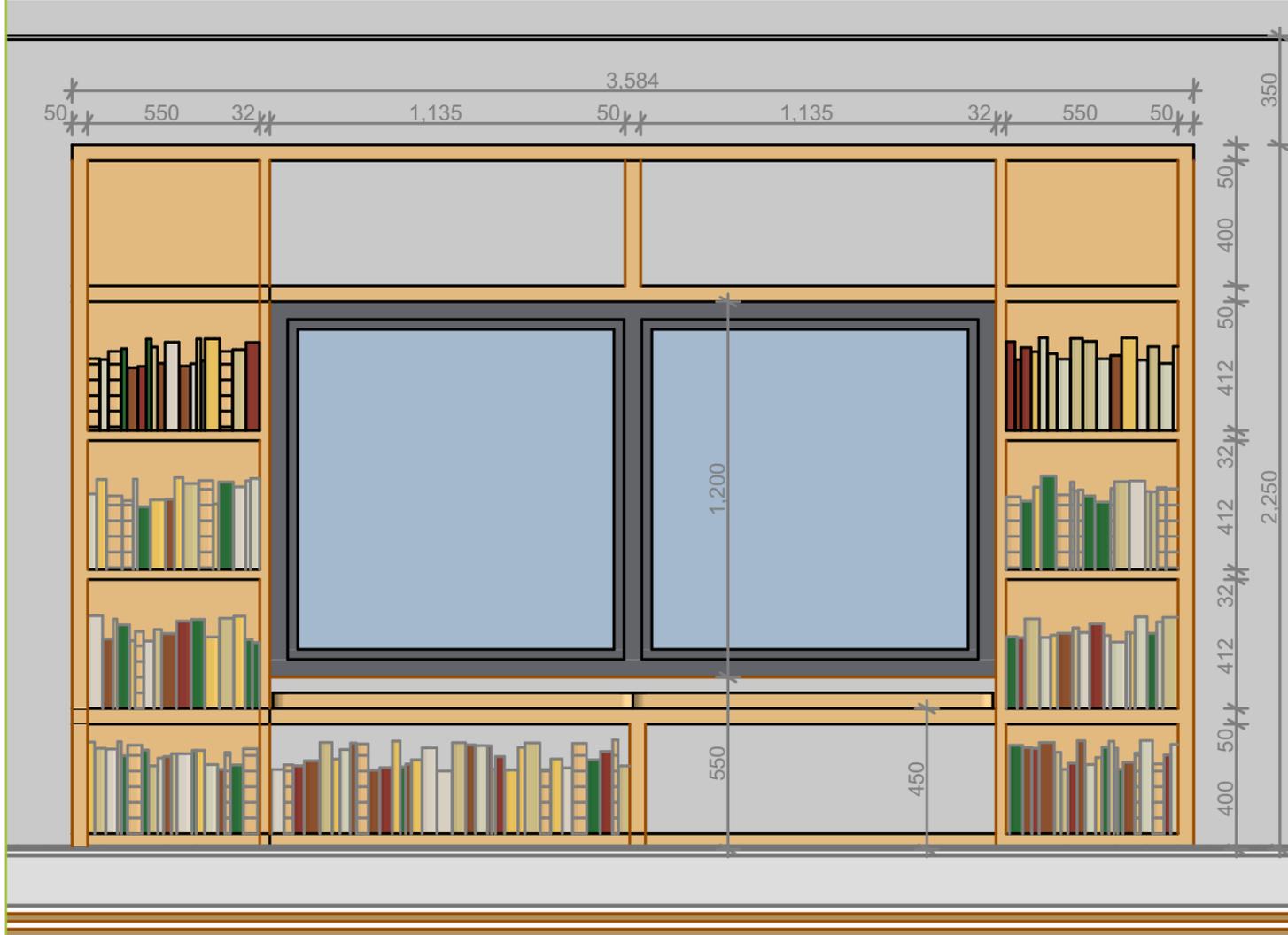


CASESTUDY: Garden School, Hackney Gollifer Langston Architects.

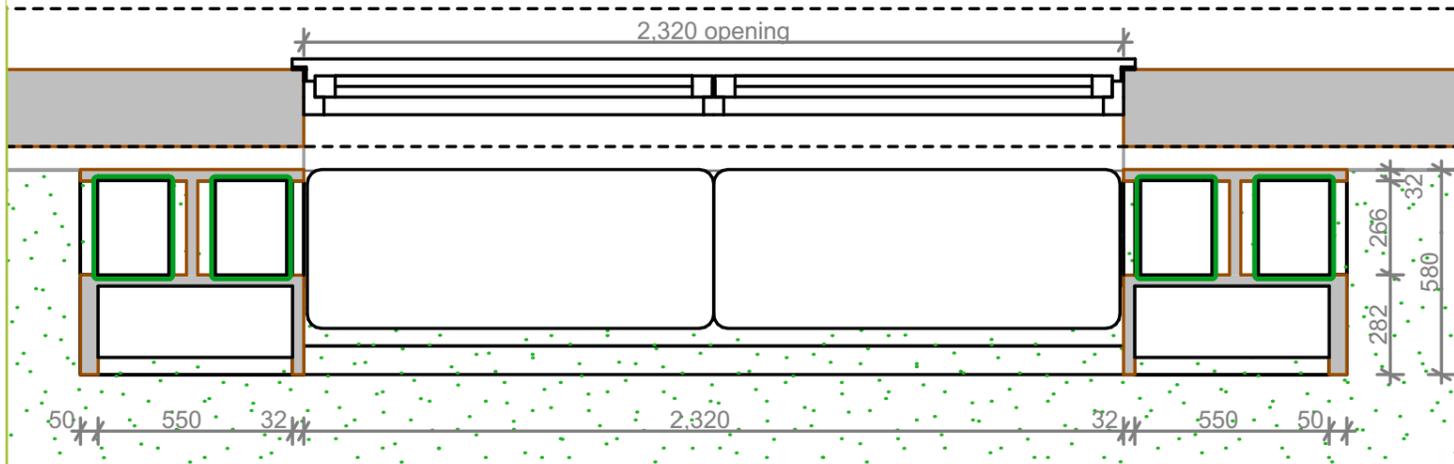
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DESIGN IDEAS - EXTERNAL

LIBRARY POD:



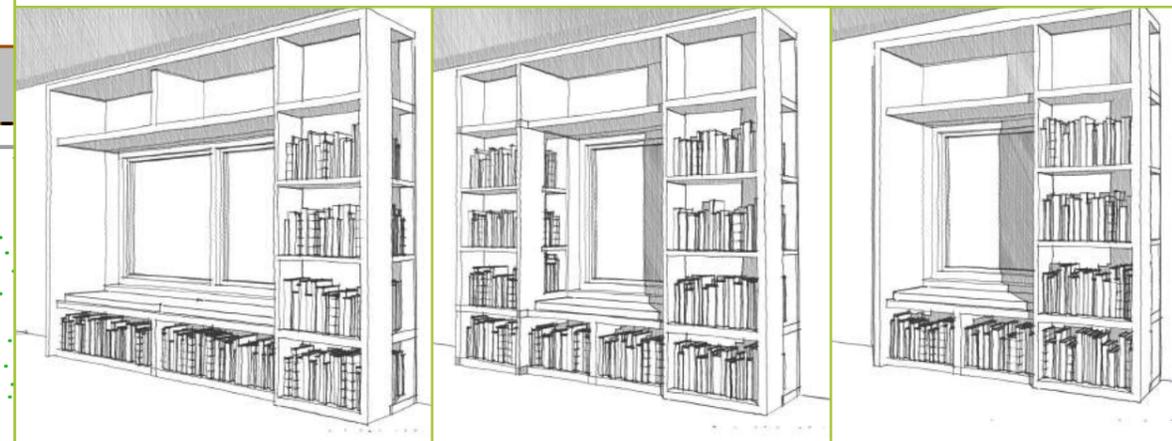
PLAN / ELEV: 1:20



RENDER:

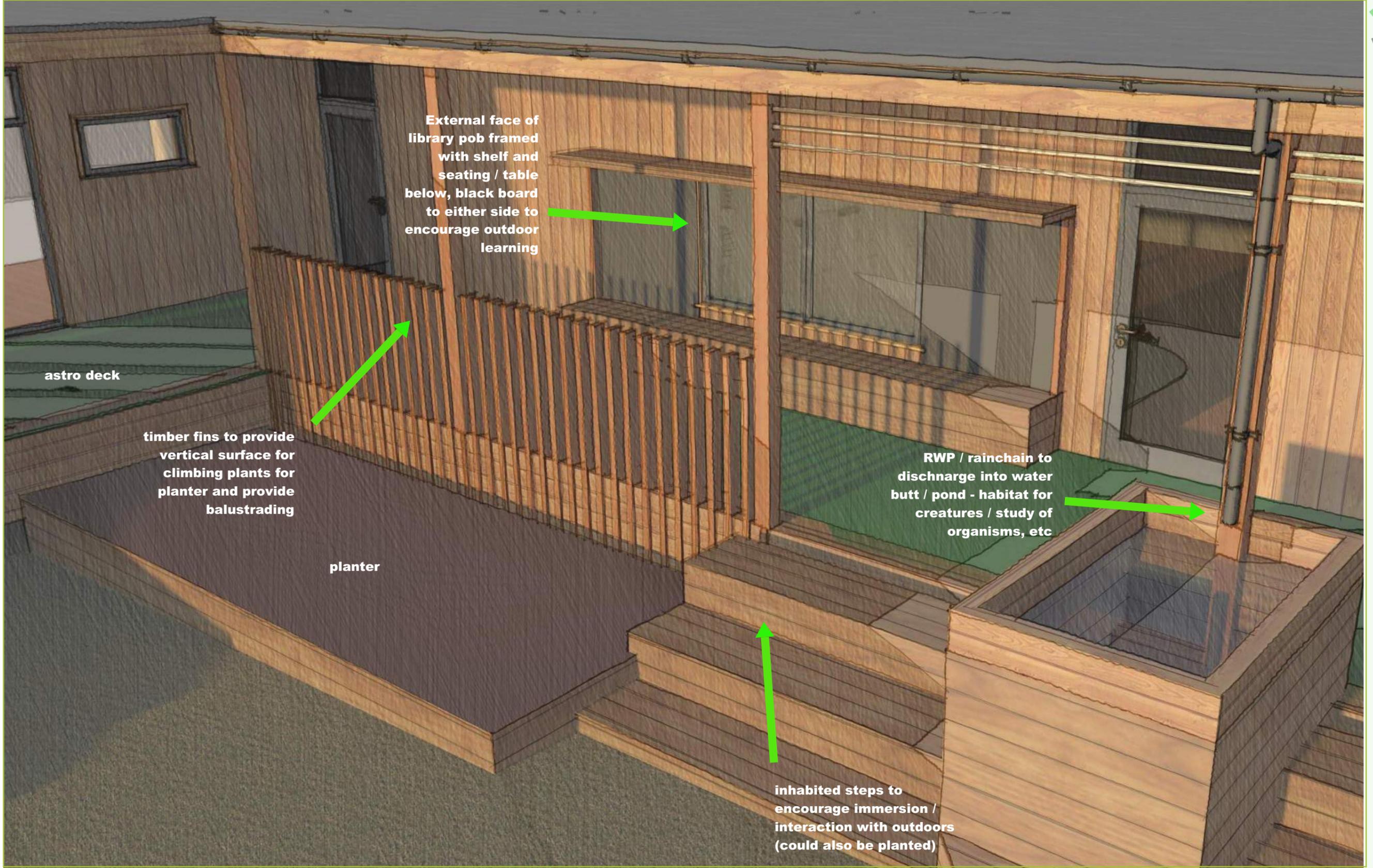


OTHER OPTIONS:



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TGE - BIO-OPTIONS - WINDOW POD



External face of library pod framed with shelf and seating / table below, black board to either side to encourage outdoor learning

astro deck

timber fins to provide vertical surface for climbing plants for planter and provide balustrading

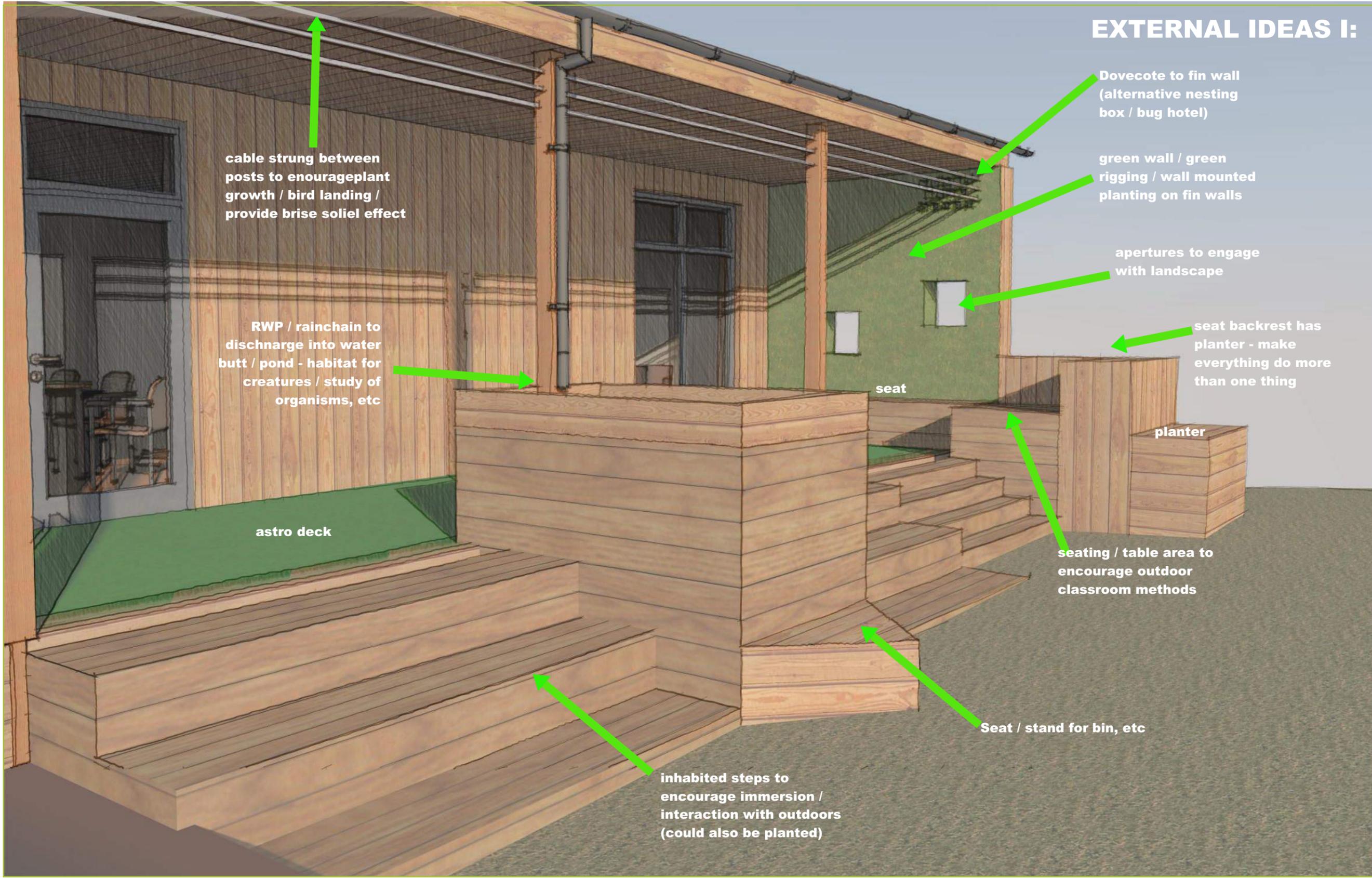
planter

RWP / rainchain to discharge into water butt / pond - habitat for creatures / study of organisms, etc

inhabited steps to encourage immersion / interaction with outdoors (could also be planted)

TGE - BIO-OPTIONS - WINDOW POD

EXTERNAL IDEAS I:



cable strung between posts to encourage plant growth / bird landing / provide brise soleil effect

RWP / rainchain to discharge into water butt / pond - habitat for creatures / study of organisms, etc

astro deck

inhabited steps to encourage immersion / interaction with outdoors (could also be planted)

Dovecote to fin wall (alternative nesting box / bug hotel)

green wall / green rigging / wall mounted planting on fin walls

apertures to engage with landscape

seat backrest has planter - make everything do more than one thing

seat

planter

seating / table area to encourage outdoor classroom methods

Seat / stand for bin, etc

BIO-OPTIONS - EXTERNAL IDEAS II

EXTERNAL IDEAS I:

pergola canopy to omit light to key areas
timber louvres provide connexion to nature

screening louvres to partition deck / provide privacy - fixed or hinged

Protruding deck to open out into the landscape - provide prospect / views etc

fins brought down to near ground - more elegant than normal balustrades and improve areas below floor for schemes raised from ground

