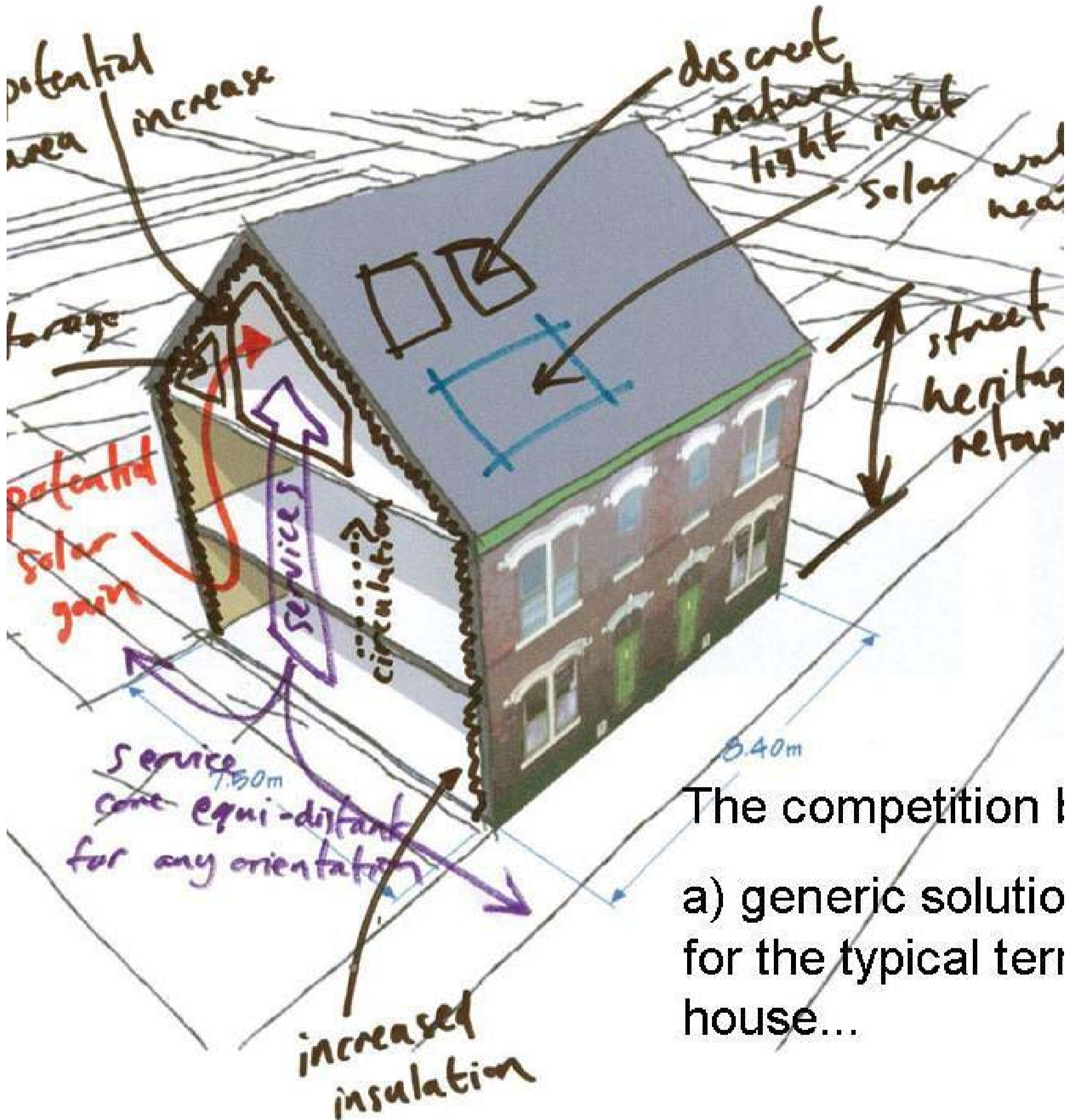


# axis design architects

news - issue 1 - february 2010



The competition 1  
a) generic solution  
for the typical terraced  
house...

# BMHT and Axis Design

Birmingham Municipal Housing Trust

Axis Design Architects continue to play a key role in Birmingham's latest housing developments. As one of the architects for the first two phases of the initiative to allow local authorities to build new homes, Axis Design have developed proposals for 5 sites across the city that will set the standard for the future of housing in Birmingham. Each scheme has been designed to deliver Code for Sustainable Homes level 4 and with the help of code assessors Brooks Devlin we have provided a renewable energy strategy that recom-

On the northern side the house types are arranged to provide a strong frontage reminiscent of the terraces around although each house type has independent front to rear access between the pairs.

On the southern side the houses are arranged as single storey extending into the garden and a second storey block across it to provide the frontage continuity necessary. This arrangement avoids overlooking from rear bedrooms by using controlled aspect and provides better privacy to rear gardens and patios. On the south facing rear garden facades it is proposed to use extensive glazed sun spaces to assist with energy conservation and provide useful amenity space for residents.

walls and hedging to demarcate private/public boundaries along the footpath edge.

The layout and housetypes have been evolved from the specifics of this inner urban site with housetypes which reinterpret the terrace and seek to incorporate off street car parking and orientation specific types for southerly orientations to the fronts and rear. The shallow site depth has necessitated the evolution of controlled aspect houses to reinforce the urban block while maintaining requisite levels of privacy. The distinctive character is intended to be a contemporary interpretation of the Victorian terrace with language of bay windows, string coursing etc. The buildings will present a high quality, long lasting response to the local-

the predominant local pattern of terraced houses. The existing pattern of on street parking is under strain from increasing car ownership and attempts to create in curtilage space within very small front garden areas. On Regent Road the housetypes have been specifically evolved to give a continuous building line in addition to gated parking spaces, off street and in curtilage where possible in readily surveilled spaces. These spaces in rear gardens have improved security and the capacity to absorb second cars, leisure vehicles and trailers without nuisance to neighbours. The total parking provision is 150% comprising 19 on plot spaces and 6 on street spaces directly in front of plots 3-7 and 17. The existing highway has greater capacity for on street park-



mends the use of photovoltaic energy which could benefit from the recently announced Feed in Tarrif.

The following images and descriptions explain our strategy for each site.

## Regent Road

17 new houses in Handsworth, Birmingham for BMHT

The site is located in Handsworth an inner ward of the city characterised by streets lined with bylaw housing in terraced arrangements with limited front gardens and parking amenities. The design proposals for this site evolved using two different responses to the northern and southern facades.

The undercroft area which results is used as covered car parking with a decorative gated frontage recessed off the highway. This arrangement balances the conflicting demands of a strong terrace close to the footpath and the need to provide secure in curtilage parking.

The house types also feature special corner tower types which are intended to complete the nodal corner treatment at Hamilton/Regent Roads and relate to the existing building opposite. The elevations will be treated in brick, tile brick, render and coloured cladding detailed to reflect the richness of the adjacent terraces. The design includes bay windows, paired windows, string course, feature panels and porches combined with low dwarf

ity and make a positive addition to its predominant character and style. The range of housetypes used for a scheme of this scale, is a direct response to the urban character of the site and the varying façade orientation.

The proposals are underpinned by the target of achieving CfSH Level 4 which reduces impacts on carbon emissions, heating, electricity use, landscape, site ecology and flora/fauna. The properties will all feature PV arrays providing financial savings to both landlord and tenant. In order to achieve code level 4 all houses must be 44% improvement on Building Regulation 2006 targets.

The residential frontages are designed to provide a strong and well defined public realm, in line with

ing available for visitors and deliveries.

## Pershore Road

BMHT Phase 1

The site is located close to the city centre in the Balsall Heath area (see location and site plans), an area characterised by sixties central development area investment in a pattern of low rise brick dwellings and medium rise flats/maisonettes. The older stock along the Pershore Road is a mix of larger, merchant class villas which have, over time, been multi-occupied or changed use to commercial.



The design concept for Pershore Road developed as a direct result of the site shape and the pattern of footpaths across it. This split the site in half and when the trees to be retained were added the site formed into two residential blocks with interlocking rear gardens and active frontages onto the surrounding roads and footpaths. Special treatment was given to the corners to ensure elevation continuity and improved security to the plots.

The plot to the south of the site has significant trees on it and the adjoining houses overlook the site. It was decided to propose a small block of flats two storeys in height and with surrounding planted open space, a direct response to the site constraints and the style of flat/maisonette development opposite.

Parking was a key determinant of the layout and a mixed strategy has been used to provide 150% parking. The rear parking courtyard for plots 1-16 became inevitable if we were to avoid access off Pershore Road close to the pedestrian crossing and/or frontage gardens entirely hard landscaped.

A wide range of house types was evolved to provide residential blocks with suitable massing and interest. The combination of wide fronted, narrow terraced types and corner houses with two and three storey forms provide a strong and varied frontage and give the site a clear local identity. The houses are proposed in a combination of brick, render and cladding to reflect the local vernacular and added material infill on feature elevations and

nodal corners. The development will be designed and built to Code for sustainable Homes (CFSH) level 3 and includes super insulation, Photo voltaic solar panels, high efficiency boilers and ecologically approved materials and landscaping.

The layout and housetypes have been evolved from the specifics of this inner urban site with its narrow depth, established mature trees, pedestrian cross routes and vehicular access constraints. The range of house-types provides a mix of narrow and

wide frontage, dual aspect, types with corner types designed to help secure any vulnerable sites. The style of architecture responds to the local context of two storey, shallow pitched houses with grey/buff brick and more recent pairs of infill hoses which feature red brick and render with coloured windows. The distinctive character is intended to be a contemporary interpretation of the local materials and larger gabled houses stretching out along this part of Pershore Rd. The apartments are designed to sit within a landscaped

garden setting with no front/back distinction, some way back from the highway, local pattern of development seen opposite the site. The emphasis on the design has been on a composition of robust materials easy to maintain and likely to mature well in this landmark site. The buildings will present a high quality, long lasting response to the locality and make a positive addition to its predominant character and style.

(images online at: <http://www.flickr.com/photos/axisdesign/>)





## Pype Hayes

BMHT Phase 2: 27 houses, Pype Hayes, Birmingham

Final phase of a mixed tenure large scale housing led regeneration project covering some 1600 houses.

A wide range of house types was evolved to provide a residential street with suitable massing and interest. The combination of wide fronted, narrow terraced types and corner houses with two and three storey forms provide a strong and varied frontage and give the site a clear local identity. The houses are proposed in a combination of two different bricks, render and cladding. The palette of materials has been chosen to correspond with the predominant materials in surrounding streets, but are here used in a more modern style to create a new identity for the BMHT site.

The development will be designed and built to Code for sustainable Homes (CFSH) level 4 and includes super insulation, Photo voltaic solar panels, high efficiency boilers and ecologically approved materials and landscaping.

Material changes along the street are coordinated to meet the adjacent existing properties either at the boundary or the opposite side of the street. Whilst the predominant character of the Pype Hayes estate provides a building line that closely follows the

line of the highway, the shape of the site in this instance created the opportunity to vary the building line. This provides greater interest to the street frontage, creates an extension of the existing green to the south and delivers better balanced garden sizes.

## Holiday Road

BMHT Phase 2: 9 houses, Handsworth, Birmingham

This is a small infill site that was previously a run of Victorian terraces until their recent demolition. It has good access to amenities thanks to the

proximity to Soho Road and the inner city and enjoys an open boundary facing onto a green space to the west.

A wide range of house types was evolved to provide a residential street with suitable massing and interest. The combination of wide fronted, narrow terraced types and corner houses with two and three storey forms provide a strong and varied frontage and give the site a clear local identity. The houses are proposed in a single brick with variation added through the use of render and relief through projecting brickwork and a 'tilebrick' tile hanging material. The

palette of materials has been chosen to correspond with the predominant materials in surrounding streets, but are here used in a more modern style to create a new identity for the BMHT site.

The layout of the site has been carefully designed to meet the demands of the very onerous level changes across the site, as well as improve the highway visibility curve on the bend between Grasmere and Holliday. The 45 degree arrangement of the houses deliver a layout on a difficult site that meets modern planning control demands such as overlooking distances.





The development will be designed and built to Code for sustainable Homes (CFSH) level 4 and includes super insulation, Photo voltaic solar panels, high efficiency boilers and ecologically approved materials and landscaping.

The character of the development is predominantly created by the innovative house types and level changes, resulting in a visually interesting roof scape and frontage. An appropriate brick choice for the period is proposed with detail added through the use of render, tile hanging and projecting brick detailing.

## Morville Street

BMHT Phase 2: 28 houses, Ladywood, Birmingham

The site lies between the recently completed urban apartment accommodation of Jupiter flats and the more suburban scale properties to the north of two storey semi-detached properties. It has good access to amenities thanks to the proximity to Broad Street and the inner city and enjoys an open boundary facing onto a green space to the west.

A wide range of house types was evolved to provide a residential street with suitable massing and interest. The combination of wide fronted, narrow terraced types and corner houses with two and three storey forms provide a strong and varied frontage and give the site a clear local identity. The houses are proposed in a combination

of two different bricks, render and cladding. The palette of materials has been chosen to correspond with the predominant materials in surrounding streets, but are here used in a more modern style to create a new identity for the BMHT site. The layout of the site aims to create secure housing blocks with clear public/private delineation whilst accommodating the existing drainage and electrical wayleaves. The development will be designed and built to Code for sustainable Homes (CFSH) level 4 and includes super insulation, Photo voltaic solar panels, high efficiency boilers and ecologically approved materials and landscaping.

The material proposals for Morville have been chosen to create a bold new housing development whilst simultaneously meeting the variety of properties nearby. The elevation strategy seeks to coordinate each block successfully to avoid the potential for a disjointed appearance due to the varied nature of the block shapes/sizes due to the services constraints. A brick base runs below cill height around each block, lifting to full height gables at key points in the site. The predominantly rendered elevations and use of bold colour follows the lead created by the nearby urban buildings.

## BMHT e-book

collaborating with bookleteer.com

Like this newspaper, we continue to explore new ways of sharing our work,

ideology and design techniques. With the help of bookleteer.com we experimented with bespoke notebooks that can be unfolded and scanned to distribute online (example below). Our specially commissioned essay on municipal housing by architecture critic Owen Hatherley is also available for free on the bookleteer site.

## BMHT press

excerpt from 24dash.com

Councillor John Lines, Cabinet Member for Housing, said: "I am delighted that Birmingham and other councils are now in a position to intervene in the housing market directly and take our first steps to build much needed affordable homes for our people.

"Given the economic climate, the housing market has weakened and

financing for RSL development has become harder, which is why we've decided to step in and take a lead. These 131 homes will be the first phase of hundreds of homes we will deliver to ensure that Birmingham residents can live in a range of sustainable, affordable homes of all sizes and tenures, across the city."

Elaine Elkington, Acting Strategic Director of Housing and Constituencies, added: "The Government's signal to relax the financial constraints on local authorities could not have come at a better time for Birmingham.

"We have a unique chance to play a far greater role in increasing affordable housing in the city through the Birmingham Municipal Housing Trust. Our plans have been developed with full support of the HCA and our proven track record as a city is on delivery"





## Ingestre Square

A mixed use scheme to create a new community centre in Blurton, Stoke on Trent

Throughout 2005 the Masterplan process involved extensive public consultation with residents, traders, local organisations, officers of the Local Authority, the Blurton Development Group, local councillors, MP, four local residents associations, faith groups,

youth groups, schools, ngo's and statutory organisations. Full details of the processes including a dedicated web site facility can be found in the Blurton masterplan document. The proposals for Ingestre Square arise directly from the recommendations contained in the

Masterplan prepared under the aegis of the Renew HMR. The site was identified for significant investment and renewal at the heart of Blurton, echoing the findings of previous feasibility studies which highlighted the decline and blight in and around a valuable local shopping amenity.

The proposals have been designed as an urban block with frontages reinforcing the existing highway and supporting safer streets by improved surveillance and activity. The extent of building along the frontages has been maximised to avoid any side/rear garden areas bounding the public realm. The two rear parking courtyards break the frontage continuity but are walled and gated for security and visual enclosure.

The scale of the proposals varies from single to three storey. The taller flat blocks being used to landmark the southern corner and announce the square beyond. The shops are single storey but have been heightened to improve the relationship to adjoining buildings. The roof areas being





parapeted helps to conceal plant and associated fixtures.

The scale differences of the adjacent buildings is unified by adopting a trabeated(goalpost) form of masonry rainscreen stepping up the hill from the projecting towers on the southern flat block. Overall the sale of the proposals is in line with previous buildings on the site and contrast sufficiently with its wider surroundings to act as a local landmark.

The local area is predominantly of brick and red tile construction with minimal porches and other door/window features. As a sub-urban peripheral estate the style of miners housing is typical of the fifties genre in NCB subsidised housing provision. The dwellings are quite soundly built but the overall environment is dull and monotonous, an observation supported by previous studies.

The new District Centre must act as a major project for rebranding and reinvigorating the wider area. The scale juxtaposition of 3 storey flats and single storey shop units with the new community centre is an opportunity to bring more material variety and colour vibrancy into Blurton with the use of architectural masonry, coloured rainscreen cladding and carefully modulated fascias, balconies and other features designed to add interest. The low rise housing on Ilford Side will have



highlights of materials used on the Finstock frontage but revert to more conventional wall and roof treatments to reflect the existing housing context opposite and adjacent to them. The external environment will include additional tree planting to soften the area and shared surface areas are designed to allow cars and pedestrians to exist in a low-speed shopping environment with quality street furniture, lighting and paving materials.

It is the intention to emphasise reclaimed hard materials to the external works of the site, sourced from within a thirty mile radius of the site, in order to minimise transport links. The palette of hard materials has been inspired by the quality clay and natural materials that were prolific in the historic developments of the region. Reclaimed red and blue engineering brick, granite setts, yorkstone pavings, blue clay pavements, red and blue quarry tile and stone kerbing will all be utilised in the delivery of pedestrian access, parking areas, driveways and boundary treatments. Front boundaries will consist of low brick walls with blue copings, or railings either fixed to ground, or mounted on a three course brick plinth. The street furniture component of the scheme will be of high quality and will aim to facilitate greater community use of the open spaces. All railings, bollards and street furniture will be produced from reclaimed steel, reprocessed within North Staffordshire. The road junction between Finstock Avenue and Ripon Road may incorporate shared surfacing to calm traffic movements, open up the character of the space and prioritise pedestrian movement.

## ecoterrace. co.uk

The energy saving terrace - a project to retrofit existing houses to a higher energy performance

Nationally housing stock stands at around 26 million, of which over 4 million homes are estimated to be at the lowest end of the energy efficiency range with energy ratings of SAP38 and lower. This equates to bands F and G the lowest on the Energy Performance Certificates (EPC).

To reach our aim of reducing the current domestic carbon emissions of over 40 million tonnes per annum (27% of total emissions) to 30 million by 2050, housing agencies and central government must make greater inroads into improving the energy efficiency of existing stock. This priority becomes all the clearer when compared to the scale of new house building at around 186,000 per annum.

Almost all of the present stock of 26 million homes will be still be occupied in the year 2050. Existing stock must make a greater contribution to carbon reduction and where better to demonstrate the challenges we face, than at the bottom end by looking at pre 1919 terraced houses.

The ecoterrace project confronts these challenges at three levels:

Firstly by undertaking live refurbishment projects applying the project principles to pre 1919 terraced premises.

Secondly, by subjecting the completed projects to post occupancy monitoring to judge the value of the various measures, both in terms of deliverable energy benefits and resident lifestyle improvements.

Thirdly, the project intends to share its ideas and experiences about what can be done to bring 100 year old houses fully into the energy efficiency debate, via innovative online tools brought together in the project web site: <http://ecoterrace.co.uk>

Typically, pre 1919 houses are solid wall; narrow fronted with two parlour rooms downstairs and rear extensions, outriggers containing kitchen, bathroom and toilet provisions. Often the gardens are long and narrow accessible by way of brick paved narrow paths from the backdoor. In some instances the houses have a rear access lane, historically used for ash and refuse collection and communal tunnel-backs where no lane was present.

Any ecoterrace house can be defined as having the three C's:

Carbon Reductions Targets

In the drive to reduce carbon footprints, the framework of regulations and building standards is increasingly seen as leaving existing buildings falling further and further behind energy efficiency targets such as CSH level 3 and above. In light of this ecoterraces sets out to demonstrate just how far the ordinary houses of the early 20th century can contribute to carbon emission reductions while providing attractive and affordable homes, 100 years after they were originally built. The Eco Terraces project houses

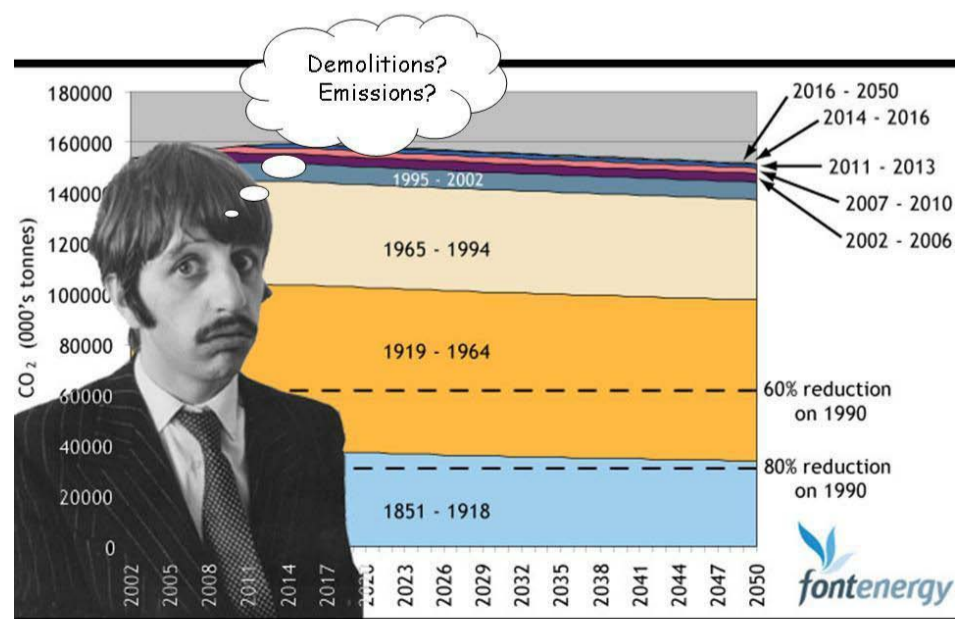


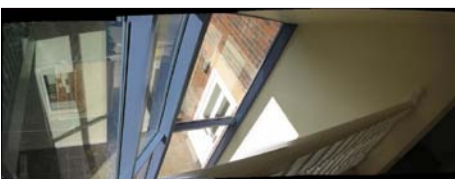
diagram courtesy of Casey Cole - carbonlimited.org



without any significant energy measures are at SAP 23 (Band G EPC) efficiency rating, almost half the national average rating of all homes. At this level their annual carbon consumption is running at over 102Kg per square metre of floor space, when an improvement to EcoHomes Very Good (EPC band C) or Excellent (EPC band B) would result in a figure of 24 Kg per square metre of floor space, a saving of close to 5 tonnes per annum per house.

#### Cash Savings Targets

The 3 million poorest quality houses, many pre 1919 solid brick houses, and the majority in private ownership or privately rented, have an energy rating of 30 and below. At this level the annual space heating only costs can range from £800 to £1200. The Eco Terrace home must deliver cash savings to its residents by reducing expenditure on the basic requirement to keep warm and removing the fuel poverty dilemma of having to choose between heating or eating. The preliminary assessments by the project consultants are that a careful combination of measures can deliver Ecohomes Very Good to Excellent scores, and potentially reduce heating costs to below £200 per annum. Putting it another way that is approaching £100 per month saving off the heating bills and added to the food shopping budget. In addition such savings from renewable sources will be all the more significant as European energy pricing continues to rise above national inflation rates.



#### Comfort and Lifestyle benefit Targets

This is a softer issue but nevertheless significant, since apart from the issue of fuel poverty, these homes if unimproved, present serious health and welfare challenges. If ecoterrace houses are not more comfortable and desirable than conventional refurbished homes, residents will not choose to live in them and their carbon footprint and energy benefits will remain a theoretical calculation. Pre 1919 stock plays an important role in the housing affordability debate and must continue to attract private investment from both first time buyers and private to let buyers. The ecoterraces interiors are carefully planned to gain significant advantages in terms of appearance and facilities over more conventional refurbishments

#### The ecoterrace design concept

Eco terraces has adopted a strategy of clearing all single storey rear outriggers and stores, bringing kitchen/utility and bathroom spaces into the centre of the plan and thereby creating two reception rooms front and back. One connected to the street and one open to the rear garden spaces.

This approach reconnects the living room with the garden, rationalises the serviced spaces and improves the aspect of all major rooms. The gathering together of kitchen and downstairs toilet provision is aimed at greater convenience and less isolation of family members with open plan living options allowing spaces to flow together, when necessary.

Most importantly for eco terraces it allows us to integrate into the designs, a range of sun spaces, some two-storey

in height, angled to improve solar orientation. The use of extensive rear glazed walls and doors delivers sunlight deep into the living space but also opens up a direct connection to the rear garden areas which traditionally tended to be long thin yards with extensive outbuildings and overshadowed paved areas.

This layered and glazed approach to the rear elevation is expected to deliver worthwhile energy and lifestyle benefits for the residents. The introduction of a lighter and airier interior atmosphere is in stark contrast to the often overshadowed darker backrooms of terraced houses.

Internally many of the plans incorporate new staircases moving the straight flight steep stairs common in such terraced houses. Where possible the ground floors feature a downstairs toilet provision and an independent utility store to remove laundry activities from the cooking zone. The provision of utility cupboards separates laundry and clothes drying from the open plan

living areas, to avoid noise and other contamination.

The combination of roof glazing and galleried living to the upper floor bedrooms increases the scale and variety of space within a very restricted floor plan. It is also a significant part of the passive solar airflow around the house. Sunspaces combine the attractiveness of largely glazed rooms with the added bonuses of free heat and somewhere to dry the laundry.

Externally ecoterrace properties will be hard to spot along a typical street frontage where the emphasis is on retaining the elevational and urban integrity while telling a completely different story at the rear. In areas of historical or local heritage significance the ability to intervene so fundamentally within the house shell but to retain its external frontage, is particularly important.





## HCA visits ecoterraces

HCA board member Kate Barker recently visited the ecoterrace project to hear about our refurbishment strategy

We were delighted to be able to give a tour of the ecoterrace properties to Kate Barker from the Homes and Communities Agency a few weeks ago. Our discussion explored the approach we'd taken that seeks to balance the compromise between carbon, cash and comfort and acknowledge the importance of the ensuring the future residents could choose to benefit from the improvements to the house. One of the most interesting observations from Kate was the fact that despite all the innovation in the property we had still created a home, rather than just a building or a project that forgets about the importance of day to day living quality.



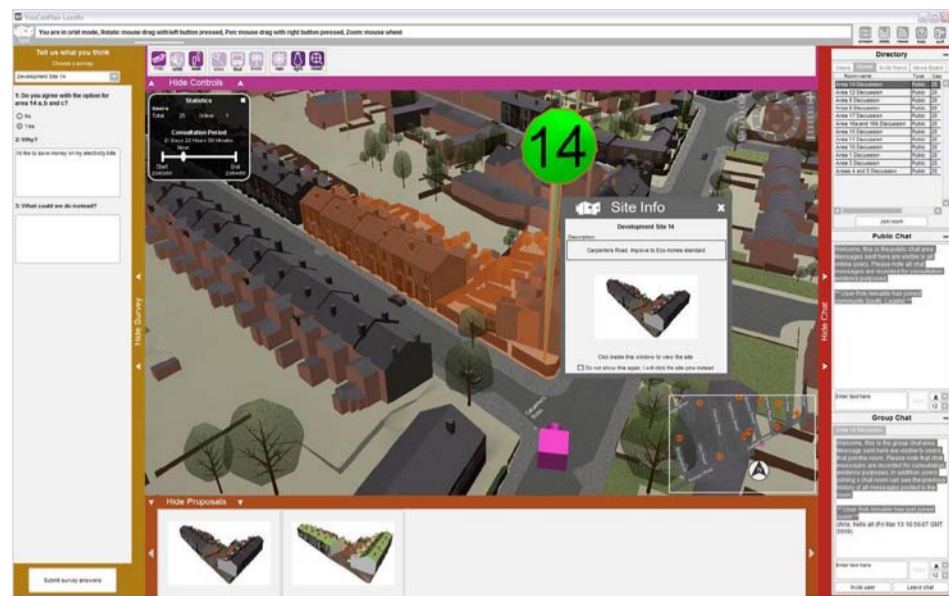
## YouCanPlan Lozells

Developing our extensive community consultation experience with the creation of an online virtual model

After months of intensive collaboration with software developers Slider Studio, we can now announce the launch of our latest development in community consultation innovation. On behalf of Birmingham City Council and Urban Living we've created a 3D software platform for the Lozells neighbourhood that allows residents to see the latest proposals for the area by the city's urban design team; then send feedback and chat with other residents and project team members.

The options can be viewed from above or from street level with the ability to switch between proposals from any point, helping the viewer make comparisons. It can be used both as an offline tool at venues without an internet connection and also online from home, outside of the usual time/location constraints for consultation events. The online option allows us to update the proposals as the project progresses and demonstrate the impact of the feedback we receive. Hopefully this project will provide a platform that Birmingham City Council can continue to deploy in future projects, commissioning 3D information to use in the software and for the creation of rapid prototyped models to use at public events.

Visit the project web site and download the software at: <http://vision-lozells.org>



## YouCanPlan – BIM and Social Media

<http://no2self.net/2009/04/22/youcanplan-bim-and-social-media/>

Axis Design and Slider Studio have created a new tool for Birmingham City Council called YouCanPlan Lozells. Slider's ESP software has been resigned to suit the challenges of the diverse people and places of community consultation work. The software will be distributed via both CD and online to over 2500 households. It can be used both online and offline to ensure it can be used in any venue, but we hope that the benefits of the online mode means that people using it from home can make the most of both the live updates to proposals in the coming months, as well as using survey and chat tools to tell Birmingham City Council what they think about the designs being proposed by the city's urban design team.

At its first public test during an event in the local park it was well received. In particular by the local teenagers who instantly took to the interface and chat tools. Making contact and building enthusiasm with the younger generations is often one of the biggest challenges with consultation work so in this case we hope that we've created something that will help us hear the voices of the future generations and perhaps bring some parents with them, curious to see what their children are using. Whilst the ability to consult with people from the comfort of their own home is huge step towards a more representative mandate from a neighbourhood, we've always described this as a tool to supplement the vital face to face debates that need to go on. With

that in mind the software can be used in offline environments and the investment in 3D modelling can be used to produce rapid prototyped physical models that match the software.

What of the future and the implications for BIM? How can this tool help us manage data about a building or street? In its current format the model and software is a framework that can take inputs and changes in a top down fashion from stakeholders whose roles are well understood. It will receive new models and designs of steadily improving detail and can display images and links to other sources of info provided by local authorities and RSLs, but what of the community? How do we build a system that allows data rising from the streets – in a bottom up fashion – to manifest itself in the model and record live information about the neighbourhood. Our experience with web 2.0 tools and consultation work tells us that there are tools available to help us and they come under the title 'social media'. Let's look at a few examples and then imagine how YouCanPlan could use them to bring BIM, post-occupancy monitoring and community consultation together.





Another social media tool that takes simple inputs and creates powerful outputs is Twitter. Unless you've been living under a particularly analogue rock lately, you'll have probably heard of this web site. Twitter simply wants you to tell it what you're doing. No, really, that's it. Just tell it what you're doing and do it within 140 characters. I've been using it for a couple of years for keeping in touch with like-minded architects and bloggers and more recently using it as a tool for dispatching the lyrics of one of my favourite bands one line at a time. Others, like Andy Stanford-Clark from IBM, have found ways to use it for recording more than just bon mots and satirical one liners. By plugging it into all the activities around the house Andy has found a way to make his home twitter. A live feed of building information as devices switch on, doors open and phones ring.

Mapping is an important part of information modelling; the data is most useful when tied accurately to location. However, mapping can be a prohibitive field as commercial restrictions can often make extensive availability and re-use of map information costly. Open Street Map allows us to avoid this problem by providing up to date maps that are completely free to use and adapt. The wikipedia of mapping, Open Street Map is by the people and for the people, created by volunteers with GPS devices all over the world. Its open source nature allows us to look at ways of combining the info with other tools such as phonecam sites like moblog.co.uk or flickr.com. Marking the position of a photo – an option increasingly done automatically by some phone models – allows us to track the latest events and activities in a neighbourhood visually. This has been successfully developed, alongside other services such as planning alerts

and transport links, by Tom Chance and Thomas Wood and their interactive map of Sutton.

Tools like these will turn platforms like YouCanPlan into a virtual environment augmented by reality. By allowing the model to plug into other information modelling systems the buildings will convey live information about the current state of a house or street or neighbourhood. The data shown in the model will help local authorities record and assess public information, and the residents will be able to keep in touch with the activities of friends and family and show landlords and local authorities what the most pressing issues are right now. The recording and public display of energy information for a household introduces the possibility of encouraged energy saving through competition. Who has saved the most money in the street this week? Who has created the most carbon?

The successful reduction of carbon emissions in the built environment to meet the targets of 2050 is entirely dependent on an improvement in performance informed by regular post-occupancy monitoring. BIM can continue to play a vital role in this process beyond the completion of the construction and there are powerful social media tools available to help make it happen. A creative approach to the field and an open mind to the power of open data formats will help the profession to share knowledge and avoid the usual debates about interoperability. We need to improve the communication between the designers and users throughout the life of the building, not just as we hand over the keys.

## blurtonvision.co.uk

creating a 'hyperlocal' blog for residents to map events in their neighbourhood

As leaders in the use of creative digital tools for the built environment Axis Design have been continued their longstanding relationship with the residents of Blurton by creating a new form of web site that maps the latest activity in their neighbourhood.

With the help of the volunteers from the Open Street Map community and advice from Tom Chance from Bioregional, Axis and Acuica Ltd

have created an online map of the neighbourhood that displays activity from other services such as planning alerts, fixmystreet.com and flickr photography.

In the coming year we hope to work with Stoke on Trent City Council, Aspire Housing, the resident group and local schools to explore how the web site can help the community keep in touch with activity in the area as the new Ingestre Square development takes shape.

## Gran Designs

our response to the Lifetime Homes challenge set by the British Homes Awards 2009...

The quality of supported housing for the 55+ market in the UK is a topic we've been discussing here at Axis Design a lot over the last few years. The 2009 brief for the British Homes Awards gave us the opportunity to explore some of our ideas and show how we believe the industry could turn to existing housing solutions from the holiday home sector combined with improved landscape and infrastructure to meet the aspirations of retiring baby boomers.

Eco Lodge Parks: Asset rich but cash poor; dire pension and savings forecast; inheritance tax worries; probably working until our seventies. The kids could help but they are mortgaged to the hilt and need help with childcare and top up fees.

Today's reality for the youth of the 60's, nurtured on the NHS, fashioned on the Mini, honed by world travel, inspired by JFK, rock & roll heavy.... their 21st century living is essentially about affordability and equity release creating third age choices and financial

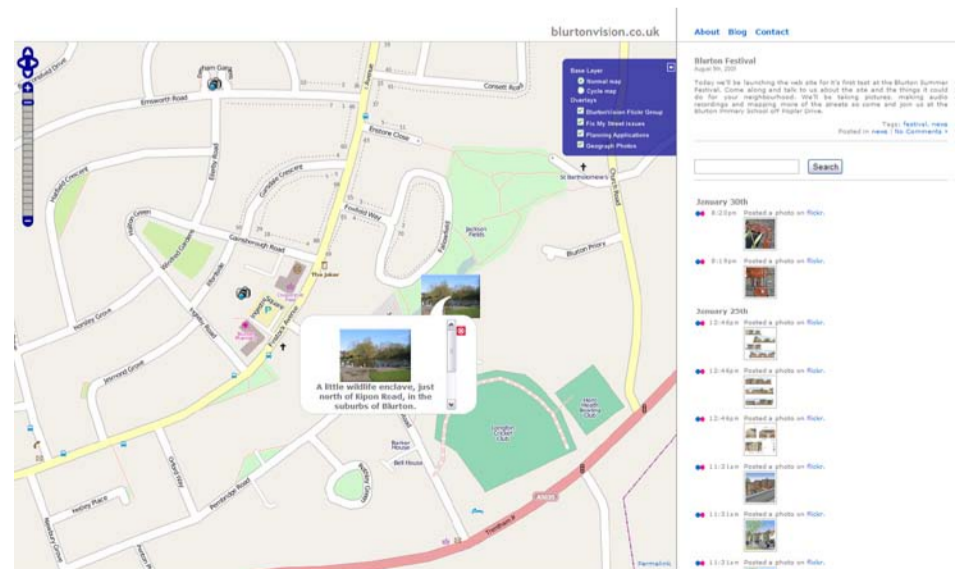
security. What if we could sell up the family home, spend one third of the proceeds on a third age home, then invest the rest, buy a villa in Goa, or help the family? In eco-Lodge Parks you can..... and even generate letting income over the next 20 years.

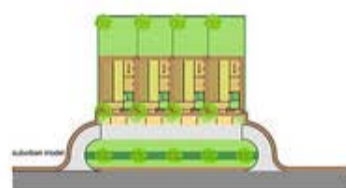
(Thanks to Jez Sanders from Red Landscape for collaborating with us on this work. Although we didn't make the shortlist we're still very pleased with the concept and hope to get the opportunity to develop it in the future.)

The Eco Lodge Park (eLP): Low cost, energy efficient, easily maintained and secure lodges suitably adapted to Lifetime Homes (see plans) laid out on a variety of site sizes, topography and shapes. The sites can vary from established waterside locales, derelict country house grounds to urban cleared land where the proximity of suitable retail, leisure and health facilities is the determinant. They could even be used to augment the income of existing clubs/parks and courses. Typically the lodges feature contemporary, flexible living spaces with two/three bedrooms (see plans) ramped access, car parking, decked living, fitted kitchens, en suite and family bathrooms. Each lodge or pair of lodges is supported by an AMP.

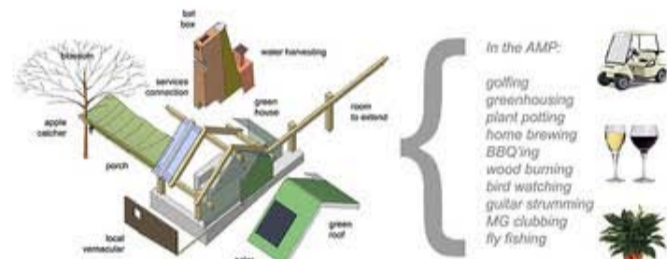
The AMP (Ancillary, Multi-use Pod) is a power & meter enclosure, rainwater storage, solar renewables, broadband conduit, recycled waste and BBQ. Externally it will reflect local vernacular and support trellised fruit/flower planting, internally it will amplify active ageing... golf buggy storage, potting shed, bird hide, rod, tackle and aqualung.

Lodge Parks would be temporary residential land uses similar to mobile homes, and annual holidays to visit the family or travel abroad could





**eco-Lodge Park**  
Exploiting the existing holiday lodge market, its manufacturing capacity and skills in combination with an innovative land use and financing package provides an affordable, choice-based future for active ageing.



# GRAN - DESIGNS

offer an opportunity for income from short term lettings. They could also be mixed use allowing for home working, community enterprises and local employment creation. The larger Eco Park sites would be managed by the Land owner and a Park Committee.

Eco Lodge Parks Land: Land typically contributes the same as build costs per plot, or more at lower densities. Adding £60-80k per lodge to the costs negates any equity released by sale, sometimes to the point where over 60's mortgage finance is called for. The eLP proposes a shared equity approach where the land owner, typically an RSL or Local Authority, would provide varying sized sites (see plans), for a 10 to 20 year period. They would generate an annual rent of between 3% and 8% of open market value; say 80k to 200k. The parks would be serviced with landscape and infrastructure with each emplacement contributing around 6k (250k per hectare).

Eco-Lodge Capital costs: Lodges come in variety of types but typically are 6m x 12m transportable modules, single

storey, highly insulated and with suitable parking and amenity spaces provide a density between 30 and 40 per hectare. A typical new 72sm lodge is presently available at £55,000, VAT free, with previously owned units as low as £15,000. The Lifetime Homes modifications which we anticipate might add £5k. The Amp and CFSH renewables will add a further £10k.

Around 70k buys you a new two bedroom, third-age lodge, 10 year guaranteed, on a landscaped and serviced site belonging to the Local Authority/RSL. Land equity sharing on a temporary use for the next two decades and time enough for the baby boomer bulge to pass, and land values to fully recover.

Lodge owners have an asset which can be written down over 20 years, rented out /sold on, gifted to the kids or moved to any other UK lodge park setting should lifestyle / circumstances dictate.

Eco-Lodge Running Costs: Lodge emplacements cost between 2k and 5k including annual maintenance costs.

Moving fees are between £400 and £1200 should you resite your lodge to be nearer the family or your hobby/pastime. On larger sites we propose some emplacements left vacant to permit resident turnover. Renewables including heat recovery ventilation, air-based heat pumps, solar water, PV lighting and rainwater harvesting augmented by a wood burning stove will dramatically reduce energy bills. Lodges are rated at CFSH level 4.

Exploiting the existing holiday lodge market, its manufacturing capacity and skills in combination with an innovative land use and financing package provides an affordable, choice-based future for active ageing.

## 2008 Award Winners

ecoterrace wins sustainability award

At the end of 2008 we we're delighted to announce that ecoterrace.co.uk won Building magazine's '99% Campaign

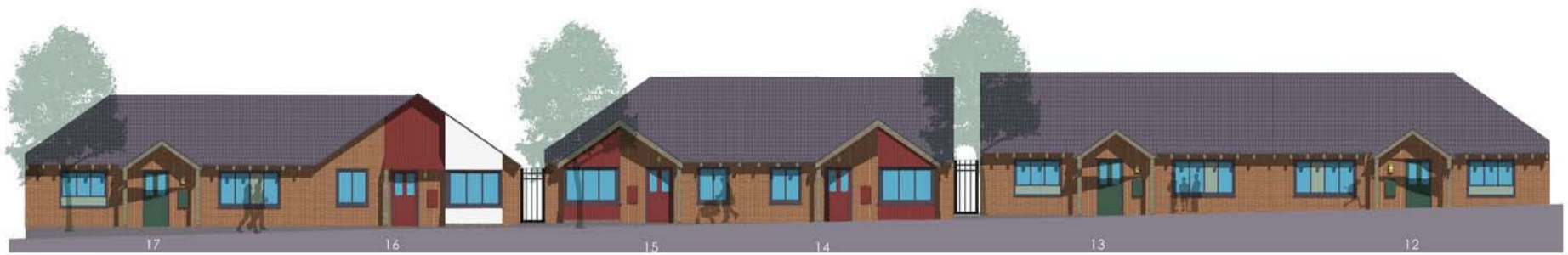
Award for Refurbishment'. The project was also a finalist in the CIH Housing Awards and Inside Housing magazine's Sustainability Awards.

Our Queens Road housing project in Stourbridge was also a finalist in the Inside Housing magazine award, shortlisted under 'Sustainable smaller social housing project of the year'.

Thanks to everyone who's collaborated with us on these very successful projects!

(below: Paul King chief executive of the UK Green Building awarding Mike Menzies from Axis Design with the '99% campaign for refurb' prize)





## Warren Road, Chell Heath

new housing for Stoke on Trent City Council

As well as our role in Birmingham to help deliver new housing stock for the local authority, we've also been designing new homes on behalf of Stoke on Trent City Council and Staffs Housing Association.

(sample elevation can be seen above)

Planning approval for 17 bungalows has just been secured in Chell Heath and the scheme will deliver a Code for Sustainable Homes Level 4. A communal garden will also be created providing future residents with a choice that will reduce their maintenance burden. The south facing rears will capitalise on the potential for PV panels and the newly announced Feed In Tarrif.

## Denham Square, Blurton

first new build scheme in Blurton

Warren Road continues our work to deliver new single storey accommodation in Stoke on Trent, following the completion of the Denham Square scheme in Blurton on behalf of Aspire Housing. The site for this infill scheme was proposed as part of our previous consultation and masterplanning commission across the neighbourhood (see blurtonvision.co.uk).



## Sunspace monitoring

a 3 year program to monitor the performance of passive solar spaces in Brandwood End, Kings Heath

Following the completion of the 2 storey sunspaces on one the latest phases of our scheme at Brandwood End in Birmingham, Axis Design and Hocker-



ton Housing Project have begun their collaboration to monitor the energy performance of the new houses.

Thanks to funding from Birmingham City Council, Waterloo Housing Association have been able to provide additional passive solar spaces to the rear of their scheme. The triangular shaped spaces designed to maximise the solar gain from the south west of the site allows the residents to benefit from the warm air created and the heating to the fabric of the building. During the next 3 years we will be making quarterly visits to read the extra meters and data loggers installed into the properties, as well as discuss the experience with the residents.

We'll be making the data public at key stages through the project and at the end of the 3 year period. More info

can also be seen online via the slides presented at Ecobuild 2009 by Rob Annable:

<http://www.slideshare.net/eversion/passive-solar-in-affordable-housing>

The image below shows the new sunspaces and the relationship to the windows into the property.



## Municipal Housing

A History of Municipal Housing - an essay by Owen Hatherley

As part of the intensive design development meetings and debates with many stakeholders during the BMHT project, Axis Design commissioned the UK's leading architecture writer to provide some thoughts on the history of municipal housing.

The complete essay is available online as a pocket-friendly e-book, but here's an excerpt. Thanks to Owen for his enthusiasm to get involved with this important project for the country's largest local authority.

"Gleadless Valley, Sheffield, 1955-1979: After 1945 many British architects and thinkers appropriated the idea of the Picturesque for Modernist purposes. Schemes like Frederick Gibberd's Lansbury neighbourhood and Harlow New Town are the most well-known of this attempt to create a specifically English integration of architecture and landscape, but Gleadless shows this aesthetic at its most stunning, set in a dramatic natural landscape and with an equally dramatic abundance of green space. Built into a steep valley, the buildings make similar use of the contours and contrasts of the landscape to Park Hill, only in low-rise, low-density form. The estate has a variety of different building types adapting to the site - terraces with mono-pitch roofs catching the steep incline of one hill, 'patio houses' divided into two levels, with entrances from different parts of the hill, more straightforward blocks of flats curving round the site with deck access from the hill, and two enclaves of towers to provide visual drama that might otherwise be lacking."

## contact us

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